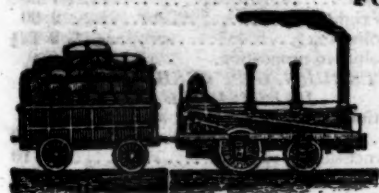


*On Colelley Mechanics*

# AMERICAN RAILROAD JOURNAL, AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY,  
AND MINES.



ESTABLISHED 1831.



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## AMERICAN RAILROAD JOURNAL.

OFFICE AT THE FRANKLIN HOUSE,  
105 Chestnut Street,  
PHILADELPHIA, PA.

This is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

TERMS.—Five Dollars a year, in advance.

### RATES OF ADVERTISING.

One page per annum.....	\$125 00
One column ".....	50 00
One square ".....	15 00
One page per month.....	30 00
One column ".....	8 00
One square ".....	2 50
One page, single insertion.....	8 00
One column ".....	3 00
One square ".....	1 00
Professional notices per annum.....	5 00

## BOSTON AND PROVIDENCE RAILROAD.

Passenger Notice. Summer Arrangement. On and after Monday, Sept. 28, 1846, the Passenger Trains will run as follows:

For New York—Night Line, via Stonington. Leaves Boston every day, but Sunday, at 5 p.m. Accommodation Trains, leave Boston at 7 a.m. and 3 p.m., and Providence at 8 a.m. and 3 p.m. Dedham trains, leave Boston at 9 a.m.; 3 p.m., 5 p.m., and 10 p.m. Leave Dedham at 8 a.m. and 4 p.m. and 9 p.m.

Stoughton trains, leave Boston at 11 a.m. and 4-10 p.m. Leave Stoughton at 8 a.m. and 2 p.m. All baggage at the risk of the owners thereof.

W. RAYMOND LEE, Sup't.  
BRANCH RAILROAD AND STAGES CONNECTING WITH THE BOSTON AND PROVIDENCE RAILROAD. Stages connect with the Accommodation trains at the Foxboro' Station, to and from Woonsocket. At the Seekonk Station, to and from Lonsdale, R. I. via Pawtucket. At the Sharon Station, to and from Walpole, Mass. And at Dedham Village Station, to and from Medford, via Medway, Mass. At Providence, to and from Bristol, via Warren, R. I. Taunton, New Bedford and Fall River cars run in connection with the accommodation trains.

## BOSTON AND MAINE RAILROAD.

Upper Route, Boston to Portland via, Reading, Andover, Haverhill, Exeter, Dover, Great Falls, South & North Berwick, Wells, Kennebunk and Saco.

Winter Arrangement, 1846-7.

On and after October 5th, 1846, Passenger Trains will leave daily, (Sundays excepted,) as follows:

Boston for Portland at 7 a.m. and 2 p.m.

Boston for Great Falls at 7 a.m., 2 p.m. and 3-25 p.m.

Boston for Haverhill at 7 a.m. and 11 a.m., 2 p.m. and 5 p.m.

Boston for Reading at 7 a.m. and 11 a.m., 2 p.m. and 5 p.m.

Portland for Boston at 7 a.m., and 3 p.m.

Great Falls for Boston at 6 a.m. and 9 a.m., and 4 p.m.

Haverhill for Boston at 7 a.m., 8 a.m. and 11 a.m. and 3 and 6 p.m.

Reading for Boston at 7 a.m. and 9 a.m., 12 m., 1 p.m., 4 and 7 p.m.

The Depot in Boston is on Haymarket Square.

Passengers are not allowed to carry Baggage above \$50 in value, and that personal Baggage, unless notice is given, and an extra amount paid, at the rate of the price of a Ticket for every \$500 additional value.

1y31 CHAS. MINOT, Super't.

## THE BEST RAILROAD ROUTE TO THE

Lake and Buffalo, from Cincinnati.

Take Cars to Xenia, 65

miles; take Stage to Mansfield, 88 miles; thence by Cars to Sandusky, 56 miles to the Lake; thence Steamboat to Buffalo, 230 miles.

Fare from Cincinnati to Sandusky.....\$8 00

" " Sandusky to Buffalo, Cabin..... 6 00

" " " " Steerage..... 4 50

Fare by this route, although the cheapest across the state, will be reduced in a short time, railroad lengthened, and speed increased.

Leave Cincinnati in the morning, arrive at Columbus at night.

Leave Columbus in the morning, arrive at Sandusky same day.

Leave Sandusky, by Boat, in the morning, arrive at Buffalo next morning in time for the Cars north and east for Niagara Falls, Canada, Saratoga Springs, Troy, Albany, Boston, New York, Washington, or Philadelphia.

Passengers should not omit to pay their fare through from Cincinnati to Sandusky, or from Columbus to Sandusky via Mansfield; as this route is the only one that secures 56 miles [this road is run over in 2h. 50m.,] most railroad which is new, and is the shortest, cheapest and most expeditious across the state.

Fares on the New York railroads are about to be reduced.

B. HIGGINS, Sup't, etc.

Sandusky, Ohio. M. & S. C. R. R. Co.

## SUMMER ARRANGEMENT.—NEW YORK

AND ERIE RAILROAD LINE, from April

1st until further notice, will

run daily (Sundays excepted) between the city of New York and Middletown, Goshen, and intermediate places, as follows:

FOR PASSENGERS—

Leave New York at 7 A. M. and 4 P. M.

" Middletown at 6 A. M. and 5 P. M.

FARE REDUCED TO \$1 25 to Middletown—way in proportion. Breakfast, supper and berths can be had on the steamboat.

FOR FREIGHT—

Leave New York at 5 P. M.

" Middletown at 12 M.

The names of the consignee and of the station where to be left, must be distinctly marked upon each article shipped. Freight not received after 5 P. M. in New York.

Apply to J. F. Clarkson, agent, at office corner of Duane and West sts. H. C. SEYMOUR, Sup't.

March 25th, 1846.

Stages run daily from Middletown, on the arrival of the afternoon train, to Milford, Carbondale, Honesdale, Montrose, Towanda, Owego, and West; also to Monticello, Windsor, Binghamton, Ithaca, etc., etc. Agent on board.

13th

## NORWICH AND WORCESTER RAILROAD.

Summer Arrangement, commencing

Monday, April 6, 1846.

Accommodation Trains, daily, except Sunday. Leave Norwich, at 6 a.m., and 4 p.m. Leave Worcester, at 10 a.m., and 4 p.m.

The morning Accommodation Trains from Norwich, and from Worcester, connect with the trains of the Boston, and Worcester and Western railroads each way.

The Evening Accommodation Train from Worcester connects with the 1 p.m. train from Boston.

New York Train via Long Island Railroad: Leave Allyn's Point for Boston, about 1 p.m., daily, except Sunday.

Leave Worcester for New York, about 10 a.m., stopping at Webster, Danielsonville, and Norwich.

New York Train via Steamboat—Leave Norwich for Boston, every morning, except Monday, on the arrival of the steamboat from New York, stopping at Norwich and Danielsonville.

Leave Worcester for New York, upon the arrival of the train from Boston, at about 4 p.m., daily, except Sunday, stopping at Webster, Danielsonville and Norwich.

Freight Trains daily each way, except Sunday. Special contracts will be made for cargoes, or large quantities of freight, on application to the superintendent.

Fares are Less when paid for Tickets than when paid in the Cars.

321y J. W. STOWELL, Sup't.



### TROY RAILROADS.—IMPORTANT NOTICES.

Troy and Greenbush Railroad, forming a continuous track from Boston to Buffalo and Saratoga Springs. This road is new, and laid with the heaviest iron H rail. Trains will always be run on this road connecting at Greenbush each way with the trains to and from Boston and intermediate places, leaving Greenbush daily at 11 p.m. and 6 p.m., or on arrival of the trains from Boston; leave Troy at 7 1/2 a.m. and 4 p.m., or to connect with trains to Boston. Trains also run hourly on this road between Troy and Albany. Running time between Greenbush and Troy, 15 minutes.

### TROY AND SCHENECTADY RAILROAD.

This road is laid its entire length with the heaviest H rail, which is not the fact with the road from Albany. Trains will always be run on this road connecting each way, to and from Buffalo and intermediate places. Leave Troy for Buffalo at 7 1/2 a.m. and 1 p.m. and 6 p.m., or to connect with the trains for the west; leave Schenectady at 2 1/2 a.m., 8 1/2 a.m., 1 p.m. and 3 1/2 p.m., or on arrival of the trains from Buffalo and intermediate places.

### TROY AND SARATOGA RAILROAD.

THE ONLY DIRECT ROUTE.

No change of passenger, baggage or other cars on this route. Cars leave Troy for Ballston, Saratoga Springs, Lake George and White Hall at 7 1/2 a.m., (arriving one hour in advance of the train from Albany), and at 3 1/2 p.m. Returning, leave Saratoga at 9 a.m. and 3 1/2 p.m., (reaching Troy in time for the evening boats to New York.) Cars also leave Troy for the Burrough at 3 1/2 p.m. and 7 p.m., connecting with packet boats for the north. This takes passengers from New York and Boston to Montreal in 44 hours.

N.B. Travellers will find the routes through Troy most convenient and economical, and as expeditious as any other. The steamboats to and from New York land within a few steps of the railroad office, and passengers are taken up and landed by the different railroad lines at the doors of principal hotels, thus saving all necessity for, and annoyance from, hack drivers, cabmen, runners, etc.

Aug 3, 1846.

1y 32

### BALTIMORE AND OHIO RAILROAD.

MAIN STEM. The Train carrying the

Great Western Mail leaves Bal-

timore every morning at 7 1/2 and

Cumberland at 8 o'clock, passing Ellicott's Mills,

Frederick, Harpers Ferry, Martinsburgh and Han-

cock, connecting daily each way with the Wash-

ington Trains at the Relay House seven miles

from Baltimore, with the Winchester Trains at

Harpers Ferry—with the various railroad and

steamboat lines between Baltimore and Philadelphia

and with the lines of Post Coaches between Cum-

berland and Wheeling and the fine Steamboats on

the Monongahela Slack Water between Brown-

sville and Pittsburgh. Time of arrival at both Cum-

berland and Baltimore 5 1/2 P. M. Fare between

those points \$7, and 4 cents per mile for less distan-

ces. Fare through to Wheeling \$11 and time about

36 hours, to Pittsburgh \$10, and time about 32 hours.

Through tickets from Philadelphia to Wheeling

\$13, to Pittsburgh \$12. Extra train daily except

Sundays from Baltimore to Frederick at 4 P. M.,

and from Frederick to Baltimore at 8 A. M.

### WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 a

night from Baltimore and at 6 A. M. and 5 1/2 P. M

from Washington, connecting daily with the lines

North, South and West at Baltimore, Washington

and the Relay house. Fare \$1.60 through between

Baltimore and Washington, in either direction, 4

cents per mile for intermediate distances. 1y31

THE SUBSCRIBER IS PREPARED TO

execute at the Trenton Iron Works, orders for

Railroad iron of any required pattern, and warrant-

ed equal in every respect in point of quality to the

best American or imported Rails. Also on hand

and made to order, Bar Iron, Braziers' and Wire

Rods, etc., etc.

PETER COOPER 17 Burling Slip.

1y10 New York.

1y10

### NEW RAILROAD ROUTE FROM BUFFALO TO CINCINNATI.

Passengers destined for

Columbus and Cincinnati.

St. Louis, Ky., St. Louis, Mo., Memphis, Tenn.,

Vicksburg, Natches, New Orleans, and all interme-

diate ports, will find a new, and the most expediti-

ous and comfortable Route, by taking Steamboats

at Buffalo, landing at Sandusky City, Ohio, distance

230 miles.

From thence by Cars, over the Mansfield

Railroad which is new and just opened

[laid with heavy iron] to Mansfield,

distance 56 "

Thence by Stage via Columbus to Xenia

over gravel and Macadamized Road,

(the best in the state), in new coaches,

distance 88 "

Thence, over the Little Miami Railroad,

from Xenia to Cincinnati, distance 65 "

TIME.

From Buffalo to Sandusky 24 hours.

Leave Sandusky 5 a.m. to Columbus 14 "

From Columbus to Cincinnati 15 "

Or say 30 hours from Sandusky to Cincinnati

over this route, including delays.

FARE.

From Buffalo to Sandusky, Cabin \$6 00

" " " Steerage 3 00

" Sandusky to Columbus 4 50

" " through to Cincinnati 8 00

Passengers should not omit to pay their fare through

from Sandusky City to Cincinnati and take receipts

availing themselves of the benefit of a contract existing

between the said Railroad and Stage Co's, securing

121 miles travel by good Railroad, and 88 miles by

Stage, in crossing from Lake Erie to the Ohio river,

in the space of 30 hours.

Passengers destined for St. Louis, or any point

below on the Mississippi, will save by taking this

route, from 4 to 6 days time and travel, and nearly

half the expense, over the Chicago and Peoria route

to the above places.

Fare by this route, although the cheapest, will in a

short time be reduced, Railroad lengthened, and

speed increased.

B. HIGGINS, Sup't, etc.

M. & S. C. R. R. Co.

Sandusky City, Ohio.

### NEW YORK & HARLEM RAILROAD

CO.—Winter Arrangement.

On and after Monday, November 23,

1846, the cars will run as follows:

Leave 27th street for 42d street, Deaf and Dumb

Institute, Yorkville, Harlem Morrisiana, and Wil-

liams' Bridge, at 7 o'clock a.m. From City Hall

for above named places, 2 p.m. [freight train,] 2 30

p.m. 5 p.m. to Morrisiana only.

Leave City Hall for Harlem, Morrisiana, Ford-

ham and Williams' Bridge, at 7 45 a.m., and 10 45

a.m.; 1 15 p.m., 2 p.m. [freight train,] 2 30 p.m. and

3 45 p.m.

Leave City Hall for Hunt's Bridge, Bronx, Tuc-

kahoe, Hart's Corners White Plains, Davis' Brook,

Unionville and Pleasantville, [Pleasantville 4 miles

from Sing Sing,] 7 45 and 10 45 a.m.; 1 15 p.m., 2

p.m. [freight train,] and 3 45 p.m.

### RETURNING.

Leave Pleasantville, at 8, 10, [freight train,] and

11, a.m.; 1 30, and 4 p.m.

Leave White Plains, at 8 12, 10 30, [freight train]

and 11 20 a.m.; 1 50, and 4 20, p.m.

Leave Tuckahoe, 8 35, 10 55, [freight train,] and

11 35, a.m.; 2 05, and 4 35, p.m.

Leave Williams' Bridge at 7 45, 8 50 and 11 50 a.

m.; 2 10, 4, and 4 50 p.m.

Leave Morrisiana 8 and 9 05 a.m.; 12 05, 2 35,

4 20, 5 05 and 6 p.m.

Leave Yorkville, at 8 12 a.m.; 4 35 and 6 15 p.m.

### SUNDAY ARRANGEMENTS.

Leave City Hall for Pleasantville and intermedi-

ate places, at 7 45 a.m.; 1 15 and 3 p.m.

Leave Pleasantville for City Hall, at 8 a.m.; 11,

and 3 15 p.m.

Leave City Hall for Williams' Bridge and intermedi-

ate places, 10 45 a.m.; 2 30 p.m.

Leave Williams' Bridge for City Hall, at 8 50

and 11 50 a.m.; 1, 3 45 and 4 05 p.m. 1y49

### BALTIMORE AND SUSQUEHANNA

Railroad.—Reduction of Fare. Morning and

Afternoon Trains between Balti-

more and York.—The Passenger

trains run daily, except Sunday, as follows:

Leaves Baltimore at 9 a.m. and 3 1/2 p.m.

Arrives at 9 a.m. and 6 1/2 p.m.

Leaves York at 5 a.m. and 3 p.m.

Arrives at 12 1/2 p.m. and 8 p.m.

Leaves York for Columbia at 1 1/2 p.m. and 8 a.m.

Leaves Columbia for York at 8 a.m. and 2 p.m.

### FARE.

Fare to York \$1 50

" Wrightsville 2 00

" Columbia 2 12 1/2

Way points in proportion.

### PITTSBURG, GETTYSBURG AND

HARRISBURG.

Through tickets to Pittsburgh via stage to Har-

risburg \$9

Or via Lancaster by railroad 10

Through tickets to Harrisburg or Gettysburg 3

In connection with the afternoon train at 3 1/2 o'clock,

a horse car is run to Green Spring and Owing's

Mill, arriving at the Mills at 5 1/2 p.m.

Returning, leaves Owing's Mills at 7 a.m.

D. C. H. BORDLEY, Sup't.

31 ly Ticket Office, 63 North st.

### LEXINGTON AND OHIO RAILROAD.

Trains leave Lexington for Frankfort daily,

at 5 o'clock a.m., and 2 p.m.

Trains leave Frankfort for Lex-

ington daily, at 8 o'clock a.m. and 2 p.m. Distance,

28 miles. Fare \$1.25.

On Sunday but one train, 5 o'clock a.m. from

Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to

15th March) is 6 o'clock a.m. from Lexington, and

ma. 9. from Frankfort, other hours as above.

351y

### SOUTH CAROLINA RAILROAD.—A

Passenger Train runs daily from Charleston,

on the arrival of the boats from

Wilmington, N. C., in connection

with trains on the Georgia, and Western and Atlan-

tic Railroads—and by stage lines and steamers con-

nects with the Montgomery and West Point, and

the Tusculum Railroad in N. Alabama.

Fare through from Charleston to Montgomery

daily \$26 50

Fare through from Charleston to Huntsville,

Decatur and Tusculum 22 00

The South Carolina Railroad Co. engage to re-

ceive merchandize consigned to their order, and to

forward the same to any point on their road; and to

the different stations on the Georgia and Western

and Atlantic railroad; and to Montgomery, Ala., by

the West Point and Montgomery Railroad.

1y25 JOHN KING, Jr, Agent.

### CENTRAL RAILROAD-FROM SAVAN-

nah to Macon. Distance 190 miles.

This Road is open for the trans-

portation of Passengers and

Freight. Rates of Passage, \$8 00. Freight—

On weight goods generally 50 cts. per hundred.

On measurement goods 13 cts. per cubic ft.

On brls. wet (except molasses

and oil) \$1 50 per barrel.

On brls. dry (except lime) 80 cts. per barrel.

On iron in pigs or bars, cast-

ings for mills, and unboxed

machinery 40 cts. per hundred.

On hdds. and pipes of liquor,

not over 120 gallons \$5 00 per hhd.

On molasses and oil \$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded

free of commission. THOMAS PURSE,

y40 Gen'l. Sup't. Transportation.

### MANUFACTURE OF PATENT WIRE

Rope and Cables for Inclined Planes, Stand-

ing Ship Rigging, Mines, Cranes, Tillers etc., by

JOHN A. ROEBLING, Civil Engineer,

Pittsburgh, Pa.

These Ropes are in successful operation on the

planes of the Portage Railroad in Pennsylvania, on

the Public Slips, on Ferries and in Mines. The

first rope put upon Plane No. 3, Portage Railroad,

has now run 4 seasons, and is still in good condi-

tion. 2y19 ly



**CENTRAL AND MACON AND WEST-ERN** Railroads, Ga.—These Roads with the Western and Atlantic Railroad of the State of Georgia, form a continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

Savannah to Macon—Central Railroad ..... 190  
Macon to Atlanta—Macon and Western..... 101  
Atlanta to Oothcaloga—Western and Atlantic.. 80

Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings..... \$0 50 To Atlanta \$0 75 To Oothcaloga  
Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grind Stones..... 0 50 0 62½  
On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot..... 0 20 0 26  
Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot..... 0 20 pr. 100 lbs. 35  
Crockery, per cubic foot..... 0 15 " 35  
Molasses and Oil, per bhd., (smaller casks in proportion) 9 00 12 50  
Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each..... 1 25 1 50  
Ploughs, (small,) and Wheelbarrows..... 0 80 1 05  
Salt, per Liverpool Sack..... 0 70 0 95  
Passage—Savannah to Atlanta, \$10; Children, under 12 years of age, half price, Savannah to Macon, \$7.

Goods consigned to the subscriber will be forwarded free of Commissions.  
Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, Forwarding Agent, C. R. R.  
Savannah, Aug. 15th, 1846. 1y34

**GREAT SOUTHERN MAIL LINE! VIA** Washington city, Richmond, Petersburg, Weldon and Charleston, S. C., direct to New Orleans. The only Line which carries the Great Southern Mail, and Twenty-four Hours in advance of Bay Line, leaving Baltimore same day.

Passengers leaving New York at 4 P.M., Philadelphia at 10 P.M., and Baltimore at 6 A.M., proceed without delay at any point, by this line, reaching Richmond in eleven, Petersburg in thirteen and a half hours, and Charleston, S. C., in two days from Baltimore.

Fare from Baltimore to Charleston..... \$21 00  
" " " Richmond..... 6 60  
For Tickets, or further information, apply at the Southern Ticket Office, adjoining the Washington Railroad Office, Pratt street, Baltimore, to 1y14. STOCTON & FALLS, Agents.

**RAILROAD SCALES.—THE ATTENTION** of Railroad Companies is particularly requested to Ellicott's Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of 20 years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.  
Factory, 9th street, near Coates, cor. Melon st.  
Office, No. 3 North 5th street, Philadelphia, Pa. 1y25

**GEORGIA RAILROAD. FROM AUGUSTA TO ATLANTA—171 MILES.**

AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO OOTHCALOGA, 80 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 388 miles in length, from Charleston to Oothcaloga on the Oostenaula River, in Cass Co., Georgia.

#### RATES OF FREIGHT.

	Between Augusta and Oothcaloga, 80 miles.	Between Charleston and Oothcaloga, 388 miles.
1st class. Boxes of Hats, Bonnets, and Furniture, per cubic foot.....	\$0 16	\$0 25
2d class. Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	0 90	1 40
3d class. Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Bar and Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 55	0 75
4th class. Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Feathers, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc.....	0 37½	0 62½
Cotton, per 100 lbs. ....	0 45	0 65
Molasses, per hogshead. ....	8 50	13 50
" " barrel.....	2 00	3 25
Salt per bushel.....	0 17	95
Salt per Liverpool sack..		
Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows....	0 75	1 37

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight may be paid at Augusta, Atlanta, or Oothcaloga.

J. EDGAR THOMSON,  
Ch. Eng. and Gen. Agent.  
Augusta, Sept. 2d, 1846. \*44 1y

**THE WESTERN AND ATLANTIC** Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tusculumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,  
Chief Engineer.  
Atlanta, Georgia, April 16th, 1846. 1y1

**TO RAILROAD COMPANIES AND MANUFACTURERS** of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE,  
E. cor. 12th and Market sts., Philad., Pa. 1y45

**LITTLE MIAMI RAILROAD.—OPEN** TO SPRINGFIELD—Distance 84 miles—

connecting at Xenia and Springfield with Messrs. Neil, Moore, & Co.'s daily daylight lines of stages going east and north, to Columbus, Zanesville, Wheeling, Cleveland, and Sandusky City, via Urbana, Bellefontaine, Kenton, and the Mad river and lake Erie railroad, or Columbus, Delaware, and the Mansfield and Sandusky City railroad—forming, by these connections, the cheapest and most expeditious route to Buffalo, Niagara Falls, Rochester, Albany, New York, and Boston.

On and after Thursday, August 13, 1846, until further notice, a Passenger train will run as follows: Leave Cincinnati daily at 9 A. M., for Milford, Foster's Crossing, Deerfield, Morrow, Fort Ancient, Freeport, Waynesville, Spring Valley, Xenia, Old Town, Yellow Springs, and Springfield.

Returning, will leave Springfield at 4 hours 35 minutes A. M. A line of Hacks runs in connection with the Cars, between Deerfield and Lebanon.

FARE—From Cincinnati to Lebanon.... \$1 00  
" " " Xenia..... 1 50  
" " " Springfield.. 2 00  
" " " Columbus... 4 00  
" " " Sandusky city 8 00

The Passenger trains runs in connection with Strader & Gorman's line of Mail Packets to Louisville.

Tickets can be procured at the Broadway Hotel, Dennison House, or at the Depot of the Company, on East Front street.

Further information and through tickets for the Stage lines, may be procured at P. Campbell, Agent on Front street, near Broadway.

The company will not be responsible for baggage beyond 50 dollars in value, unless the same is returned to the conductor or agent, and freight paid at a passage for every \$500 in value over that amount.

The 1 P. M. train from Cincinnati, and the 2 40 P. M. train from Xenia, will be discontinued on and after Monday, the 10th instant.

A freight train will run daily.  
W. H. CLEMENT, Supt.

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JOHN W. ALLEN, President,  
A. G. LAWRENCE, Secretary,  
CYRUS WILLIAMS, Engineer.  
Cleveland, October 23, 1846. 45-1m

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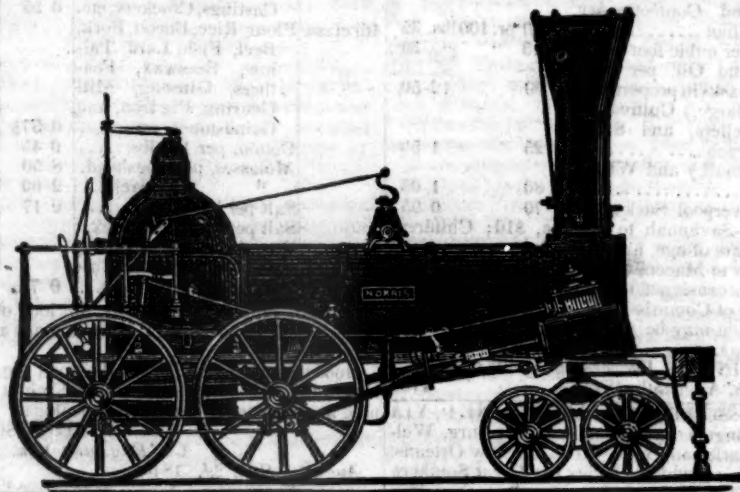
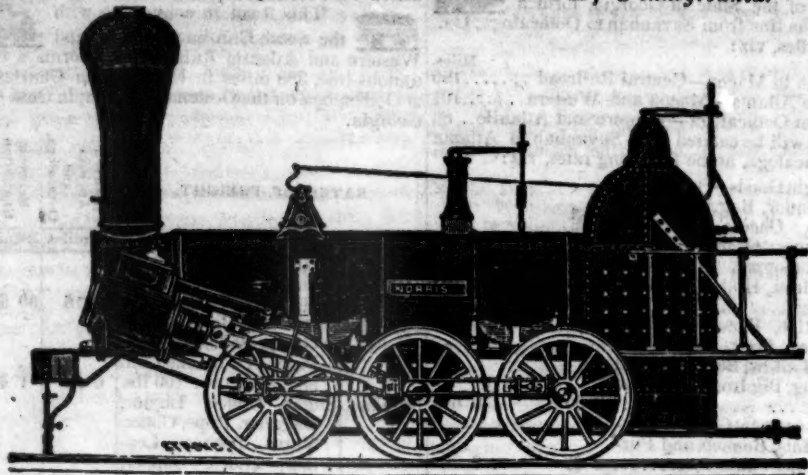
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"Railways at Home and Abroad."

THE EDINBURGH REVIEW, AND ITS ARTICLE ON RAILWAYS. (ART. VII.)

(Continued from page 8.)

The line from Amsterdam to the frontier of Prussia is completed, and open as far as Arnheim, a distance of fifty-eight miles. This was constructed by the state, but afterwards leased to an Anglo Dutch Company. The capital invested being £800,000, the cost is £15,000 per mile. Privileges have been granted to companies for the construction of various other lines.

In a late session of the Second Chamber of the States-General, the minister of the Interior announced the approaching execution, through the instrumentality of private companies, of a complete system of railways; surveyed and laid out under the immediate superintendence of the government—the total capital to be invested in which would amount to from six to seven millions sterling.

Passing over the Italian States and Portugal, where little has yet been done in railway undertakings, we shall only add, as to Spain, that if behind other European powers in the improvement of inland transport at home, she has not been so supine in her colonies. A railway, forty-five miles in length, was constructed across the most fertile part of the beautiful island of Cuba, so early as 1833, and has since been in constant use. It is difficult to convey any adequate impression of the effects produced on the mind of the traveller as he is carried over this natural garden, in a way so little to be expected, amid such scenery. Emerging from the tacon suburbs of the Havanna, he traverses fields of pine-apples, bordered by hedgerows bending under the burden of the ripe orange, and sprinkled at intervals with the banana, the plantain, and the cocoa-tree. These are alternated with sugar plantations and tobacco. Through this scene, redolent of the Tropics, and calling up the historic recollections of Columbus and his adventurous companions, he is whirled at the rate of twenty miles an hour, by machines bearing the name of a Manchester manufacturer, impelled by fuel from Lancashire, and worked by an engineer from Newcastle-on-Tyne! The swarthy African, as the strange apparition passes him, pauses from his toil, and gazes at it with a wonder which time and custom can hardly abate.

The advantages which railway transit presents on the score of expedition, economy and certainty, have, in the estimation of a considerable portion of the public, not only in England but elsewhere, been regarded as subject to a serious drawback and qualification, in consequence of the terrible character of the accidents which have from time to time occurred. The circumstantial details of cases, circulated in highly-colored accounts by the daily press, are certainly calculated to raise much apprehension. We shall now, therefore, lay before the public such data of a well-ascertained nature, as may enable every one endowed with common sense and reflection, to decide on the

actual nature and degree of danger to which he exposes his person when he makes a journey by railway conveyance.

By the official reports of the Belgian Railways we find that 6,609,215 passengers travelled on these lines between 1835 and 1839. Of this number fifteen were killed and sixteen wounded by railway accidents. But of these numbers twenty six were persons employed on the road or in working the trains. Only three passengers were killed and two wounded. The chances of the death of a passenger from railway accident were therefore 1 to 2,203,215. In 1842, the number of passengers was 2,716,755. Of these three only were killed, one of whom was a suicide, and the other two met their deaths by crossing the line.

On the French lines, the deaths from accident have been still more rare. According to an official return for the first six months of 1843, upon the six lines which issued from the capital, of which the total length was 212 miles, the circulation had amounted to 18,446 trains, which transported 1,889,718 passengers. The distance travelled over was 316,945 miles. No traveller was either killed or wounded. Only three agents of the railway suffered.

It may not be uninteresting to put in juxtaposition with this, the returns of accidents produced by ordinary horse-coaches, travelling in Paris and its environs:

Year.	Killed.	Wounded.
1834	4	134
1835	12	214
1836	5	220
1837	11	361
1838	19	366
1839	9	384
1840	14	394
Total,	74	2073

On the English railways, of which the extent and traffic are much greater, the absolute number of accidents fatal or injurious must of course be expected to be more numerous. But we shall find, by referring to the Parliamentary returns, that the actual amount of danger to life or limb, on English railways, is quite insignificant. We take the following Statement from the last return of the Railway Department to Parliament:

Years.	Number of accidents.	Number of persons injured.		
		Killed.	Injured not fatally.	Total.
1840.	23	22	131	153
(five months)				
1841	29	24	72	72
1842	10	5	14	14
1843	6	3	3	4
1844	34	10	74	74
1845	15	2	30	30

Years.	No. of miles of Railway open.	Total No. of Passengers the total number carried.	Proportion of the No. of persons injured to the number carried.	
			1 in	Total.
1840	1330	6,039,866	1 in	39,410
(five months)				
1841	1556	20,449,745	1 in	213,018
1842	1717	21,358,445	1 in	1,124,128
1843	1793	25,572,525	1 in	4,262,087
1844	1912	30,363,052	1 in	356,703
1845	2118	16,720,550	1 in	592,517

It appears, therefore, that the chance in favor of the safety of travellers who con-

duct themselves with ordinary prudence, is half a million to one.

It may perhaps be asked, what is the kind or degree of prudence or caution expected from railway travellers, as more especially necessary to their security. We answer, as the result of rather large experience of railway travelling in nearly every part of the globe, that the best general rule is to keep your place in the carriage, if possible, to the end of your journey; never getting out and in at stations, except when indispensably necessary.

Among the numerous questions which have arisen out of the conflicting interests engaged in railway speculations in England, there is one which demands some notice, were it only on account of the extraordinary extent to which it has lately engrossed public attention. Nothing can more strikingly demonstrate the profound and general interest felt in everything connected with railways than the bitterness which has marked the contest, in which dispassionate and disinterested parties would find it difficult to discover any ground for a reasonable doubt as to the proper decision to be come to.

We have seen that there was in operation, at the close of last year, about 2100 miles of railway. In the construction of 1860 miles of these, the space between the rails was fixed, in accordance with that adopted in the earlier lines, at 56½ inches; an uniformity rendered necessary in order to enable engines and carriages freely to pass from line to line throughout the country. A line called the Great Western had been laid down through a certain tract of the country, with an exceptional width (or gauge as it has been called) of 84 inches; and from this line subsequently branches were extended, having, of necessity, the same gauge. It was, of course, evident from the beginning, that this system of exceptional lines, now amounting to 240 miles, by the adoption of a different gauge, dissociated itself from all other British railways; the commerce of which could never flow into it, nor could they receive from it any commerce except by transhipment. It was said at the time, by the superintending engineer of these lines, that the departure from the ordinary gauge was 'undoubtedly an inconvenience. It amounts to a prohibition to almost any railway running northward from London; as they must all, more or less, depend for their supply on other lines or districts where railways already exist, and with which they must hope to be connected. In such cases there is no alternative. The Great Western Railway, however, broke ground in an entirely new district in which railways were unknown.

It can have no connection with any other of the main lines; and the principal branches were well considered, and almost formed part of the original plan; nor can these be dependent on any other existing lines, for the traffic which they will bring to the main trunk."

\* Report of J. K. Brunel to Directors of Great Western Railway. 1838.



The commercial isolation of this exceptional system was, therefore, contemplated by the engineer and directors, and consequently no inconvenience to themselves or the public was feared. Indeed none, in that case, would have ensued. But, in the event, the development of railway transport far transcended the anticipations of the engineer and directors of the exceptional gauge, as well as all the rest of the world; and, contrary to their expectations, the ramifications of the general gauge have already come into contact with those of the exceptional gauge; and experience has proved Mr. Brunel to have fallen into a serious error, when he declared, so explicitly, that the exceptional system could never derive its traffic from the general lines of the country. One point of contact has been produced, and a line of others must ensue. The question then arises, what is to be done?

The narrow strip of England, extending westward from London towards Bristol and Exeter, where the exceptional system of railways now prevails, is about to be insulated from the remainder of the country, north and south. It will be, so far as regards railway communication, as though it were separated from the rest of the kingdom by a river, too wide and too deep to be crossed by a bridge. The commerce between it and the districts north and south must be conveyed by ferries at each point, on the banks of this river, where the railways respectively abut. Passengers arriving on either side must leave their carriages, taking with them their *impedimenta*, great and small—such as great-coats, umbrellas, parasols, and carpet-bags. And all this must happen night and day, in fair weather and foul. The wife and children must, equally in the pelting storm, and in the darkness of night, bustle their way through the mud from the one train to the other. The trains of merchandise must all be unloaded and unpacked on one side, and reloaded and repacked on the other; to the loss and damage of the owners, and delay and cost of transit; for *some one* must pay for all this labor, and who that *some one* shall be, it is not difficult to tell. Regiments of porters must be maintained at these limits of the exceptional gauge; and must be relieved by relays from time to time, for the work will be incessant night and day. And this is to be going on perpetually through the year, and from year to year, as long as railways shall endure, along a boundary line running on both sides parallel to a main railway, 200 miles long!

But it may be asked, whether there is no countervailing advantage to set off against this intolerable evil? A long and expensive inquest has been held on the matter by the Queen's Commissioners, duly appointed, and a ponderous mass of evidence has been collected. The result is, that either the ordinary or the exceptional system of railway affords all the safety, comfort, regularity, and speed, which the public can possibly desire; that they both have ample power and capacity to satisfy all the wants of commerce which either exist or can be

reasonably anticipated. The partisans of each system contend for relative superiorities in various respects; but the differences claimed are so minute as to be discoverable only by those pledged to the success of the one system or the other; and are such as cannot, in the remotest degree, interest the public.

The magnitude of the nuisance, then, being admitted on all hands, and the utter impracticability of all expedients suggested for its abatement, nothing remains but to remove it; either by replacing the general gauge of the country by the exceptional gauge (which would render necessary the enlargement of all bridges, viaducts, tunnels, embankments, and cuttings, and a reconstruction of the stations and depots), or to bring the rails on the 240 miles of exceptional lines closer together, and modify the carriages and engines accordingly. The former measure is of course out of the question, but the latter could be accomplished, without interruption to the traffic, at a cost of something less than a million sterling.\*

It is contended, however, that the exceptional lines having been constructed under the sanction of an act of Parliament, the shareholders could not with justice be required to subject themselves to such an expense for the common good; that still less could the shareholders of other lines be so required. We are not disposed, nor will our limits allow us, to discuss this question of vested rights. But it appears to us very evident, that the British public cannot, and ought not to suffer itself to be made the victims of this nuisance; and that if the expense of its abatement can be obtained, consistently with justice, from no other quarter, it must come from the public treasury.

When the earlier railway bills passed the legislature, the privileges and rights contemplated, as well by the companies as by Parliament, were merely those necessary to enable them to construct and maintain a road, which was to be open to all who might desire to use it, on the payment of a certain toll to the company. In fact, at that time, a railway presented no condition or features to distinguish it essentially from any other highway. But simultaneously with the

\* The question of the relative merits of the two gauges, involving many complicated points of practical engineering, is one upon which all that part of the world beyond the immediate profession of civil engineers, can only judge by the weight of authority on the one side, and the other among the members of the profession itself. Perhaps there never was a question on which so little real practical difference of opinion prevailed. Nearly the entire profession of England are in favor of the ordinary gauge. A few, *were it all to do again*, would have adopted a somewhat wider, but not the exceptional gauge. But none would now think of disturbing the uniformity which all agree to be of paramount necessity. The engineering profession of France, Belgium, the Germanic States, and other countries of Europe, and that of America, have adopted the ordinary gauge (56½ inches), although they were free to have selected a wider one. Thus, so far as regards engineering authority, we have in one scale the entire engineering profession in every country in the world; and in the other, the solitary individual authority of Mr. Brunel.

construction of these roads, the invention and improvement of the machinery for transport on them, made advances. The locomotive engine broke its shell and emerged in its incipient form. Its growth was rapid and precocious. The vehicles which it drew, and in which the business of transport was executed, were novel. In a word, a system of carrying mechanism, of an entirely new structure, was produced. This mechanism was made for the railway, and the railway made for it. The system had unity and connection. It was impossible to separate it; and the carrying business could only be conducted by those who had the direction and management of the railway. The companies, therefore, found themselves—by a necessity arising from the very nature of things, and whether they liked it or not—carriers as well as road-owners. Not only was this the case, but they were necessarily the *only* carriers. It was impossible even to imagine the public bringing their private engines and private carriages on the road. A colossal monopoly, never contemplated by Parliament, nor even foreseen by the companies themselves, had come into being.

The moment that it became apparent, in the practical results of the operation of railway in England, that these lines of communication must displace, in a great degree, if not altogether, the public highways, as well for the conveyance of passengers as for the transport of merchandise, it was perceived, in other countries, that the right of the state over all high-roads must be equally asserted over the new ways of intercommunication which were about to be substituted for them. But a further and more stringent power was everywhere claimed, as the consequence of the inevitable establishment of the monopoly of transport on these roads. The state must either assume that monopoly itself, as it does universally in regard to the conveyance of the correspondence of the public; or if it were conferred on private bodies, it must be under rigorously prescribed conditions and limited periods. Such were the broad general principles assumed, admitted, and acted upon, in every country of the world—*Great Britain alone excepted*.

In some cases, it was the policy of the state to reserve to itself not only the construction but the maintenance and working of the principal railways. An obvious advantage attended this. If it seemed expedient to the legislature, the transport of goods and persons might be used as a source of revenue; as the conveyance of correspondence generally has. Or, if the state were guided by a different policy, and considered facility of intercommunication an advantage paramount to revenue, it could fix the tariff so that the net produce would merely pay the expense of transport. Thus, as England sacrificed a portion of her revenue for the public advantage of a *penny postage*, other countries might consider it good to establish a system of *penny travelling*. The indirect advantages to the exchequer might more than balance the revenue lost.



Belgium acted on this principle with complete success. All the principal railways of that country are in the hands of the state; and the tariff is so regulated as to produce about four per cent. interest, on the capital invested in the construction of the lines.

In cases where the state decides against working the railways, it sometimes, wholly or partially, constructs them; and then lets them for a term of years, to a company who pays a premium for the lease, and completes the lines at its own charge, if they are unfinished. In these leases, there are various clauses restricting the power of the company—reserving a right of revision to the state, fixing the major limit of the fares, the conditions on which the state can cancel the lease, and the terms on which the line is to be surrendered by the company at its termination.

In Austria, the railways were, in the first instance, conceded to companies on leases for fifty years. But, subsequently, the government recovered by purchase the roads, and now for the most part the railways are under the control and management of the state.

In Prussia, the construction and management of railways are conceded to companies, subject to the control of the state. The tariff is subject to revision by the government, and the profits are not in any case to be allowed to exceed ten per cent. The companies submit their accounts annually to the Minister; and when, by a sinking fund established on prescribed conditions, the capital has been replaced, the tariff is to be so modified that the profit shall not exceed the expenses of the working lines.

In Bavaria, the lines are leased to companies for a term of years, the tariff being revised by the state annually, for the first three years after the opening of each line, and subsequently every third year. Privileges are in some cases conceded to companies—such as exemption from, or reduction of, the import duties for materials, and gratuitous occupation of the state lands. In some cases the state levels the ground at its own charge; in others, it executes the earth-works. In fine, the establishment of railways is generally a matter of bargain between the state and the company. The latter receives a lease for a term of years, for which it pays a certain premium. This premium is expended in the total or partial construction of the road. It submits to certain clauses authorizing the interference of the state with its tariff; and at the expiration of the lease, receives a fair value for its stock of moving power and machinery for transport.

In France, the system of railways, with a few exceptions, has been planned, and in many cases constructed, by the government, through the intervention of the department *des ponts et chaussées*. Ultimately the line is offered to competition by the Minister of public works, who names the major limits of the duration of the lease, and rate of the tariff. The company or individual who, complying with the other conditions, offers

in sealed proposals to accept the shortest lease, obtains the grant.

Before the successful establishment of some of the earlier passenger lines, the French government found it necessary to extend some further inducements to attract capital to these enterprises. Thus, in the cases of the lines from Paris to St. Germain, Versailles, Rouen, and Orleans, leases of ninety-nine years were granted. Since, however, the results of these first lines have become known, and capital has been elsewhere more generally attracted to railway enterprises, the state has effected much more advantageous bargains. The great northern line to Brussels has been taken on a lease of thirty-eight years; the Orleans and Bordeaux on a lease of twenty-eight years; the line from Tours to Nantes on a lease for thirty-four years. Of the entire system of French lines, there are not more than one hundred and twenty miles granted in perpetuity; and these are chiefly coal and mineral railways; established long before lines for passengers and general traffic were contemplated.

In the United States, the state governments have generally reserved, in one form or another, a right of control over railways. In some cases, they are themselves the chief shareholders; in some, they have lent to the companies capital at a low rate of interest; in some they have given the guarantee of the state for the capital raised. In all such cases, the right of control is admitted. In some cases, the dividends are limited to ten per cent, the legal interest of money being six or seven per cent. In some cases there is reserved a right of revision of the fares every four years. In some of the principal states—New York, Pennsylvania, and Virginia, for example—the charters of the companies contain a clause investing the legislature with an absolute right at any time of modifying them. Subject to such conditions, the railway charters in some states are not limited in duration; but in the principal states the duration varies from fifty to one hundred years.

By the system so widely pursued in France, and most other countries, the advantages arising from private enterprise are combined with sufficient security for the public, against the abuse of the powers entrusted to railway companies. Not only is a general power of supervision and control reserved; but the tenure of the companies being limited in duration, the entire internal communications of the country must revert to the state after a certain period. Thus, at the expiration of forty years, all the chief railways of France will be in the hands of the government; and in about ninety years, private companies will cease to exist—unless such as the government may think fit to re-constitute.

It thus appears, that England is the only country in the world whose legislature has committed the singular imprudence, of surrendering, without available conditions, and for an indefinite time, its public communications into private hands. That such mono-

polies can continue to exercise the powers granted to them, without the abuses to which all monopolies have been obnoxious, is not to be conceived. There are already tendencies manifested to struggle for the private objects of these bodies, against the fair claims and interests of the public. The railway companies, as they first acquired their rights of incorporation, were numerous. Each line was a separate property, and ruled by a separate Board of Directors. Although it appears that no such thing as a competing line is practicable, yet in this multitude of lines, there might be expected something approaching to competition; many small monopolies, it might be hoped, would check each other. The practice of amalgamation and combination, which has begun already to prevail so extensively, must, however, dispel these hopes. The lesser companies are severally gravitating towards, and coalescing with the greater bodies; and instead of a great number of small monopolies, in which the system commenced, it is now tending towards a small number of great monopolies, in which it must ultimately terminate.

The indisputable existence of these monopolies, and the liability of the abuse of their powers to the prejudice of the public, necessarily seems to infer the assumption of a corresponding control on the part of the legislature; for to suppose the indefinite continuance of an arbitrary power over the personal and commercial communications of the country, exempt alike from the operation of competition and legislative control, is an absurdity too palpable to be, by any one, seriously asserted.

It may, however, be contended that no case for interference has yet arisen, and that, when it occurs, it will be time enough to provide for it. But is it not certain, that measures have been already taken to neutralize the competition of the canals in the transportation of merchandise? It was proved before Mr. Morrison's committee, that some of the companies have already succeeded in getting possession of portions of canals, on which they have raised the tolls to their parliamentary limit; thereby paralyzing the business of the entire line, and driving the traffic to the railway, on its own terms. It is proved also, that in order to evade the provisions, few and ineffectual as they are, which the Legislature has made to check the evils of their monopoly, the larger and more powerful companies have created fictitious shares in enormous numbers, so as to make their capital appear larger, and their profits consequently smaller, and thus to exclude parliamentary interference, in the only case in which it was contemplated.

It may be said, that as Parliament has established limits to the tariff of railway traffic, so long as the companies keep within these, they should be subject to no interference. To this, however, it may be answered, that when these limits were fixed, the legislature had no sufficient data by which an equitable amount could be established. Can it for a moment be maintained,



that if, by any new inventions, railways could be constructed by the expenditure of half the capital sunk on those now open, and worked at half the present current expense, the public would not have the right to demand a proportionate reduction in the carrying tariff?

"If a new line could in any case be constructed for half the expense of an existing line, or, supposing the expense to be the same, if it were constructed by parties who would be satisfied with a dividend of five instead of ten per cent, parliament is bound to sanction the new line, unless the company make a corresponding reduction in the fares on the present line. One or other of these results must take place; for if the principle be true, that capital will force its way into those employments which yield more than the ordinary rate of profit, it will be impossible to maintain the monopoly and the high charges of the old companies."

The fares on British Railways are higher than on any other European lines. The first-class fares are sixty three per cent. higher than those on the French and German railways, seventy-five per cent. higher than the Belgian, one hundred per cent. higher than on the Italian, and one hundred and sixty per cent. higher than on the Danish lines. The second-class fares are fifty per cent. higher than those of France and Germany, and one hundred and twenty-five per cent. higher than those of Belgium and Denmark. They are one hundred per cent. higher than those of Italy. The third-class fares are sixty-six per cent. higher than in Belgium, one hundred per cent. higher than in Denmark and Italy, thirty-three per cent. higher than in Germany, and fourteen per cent. higher than in France. In no other country are the working classes conveyed in a manner so discreditable to humanity, and to the true interests of the carriers themselves. In short, it is evident that the abuses which have at all times and everywhere attended monopolies, have already manifested themselves in our Railway management, and are certain to augment, to the great prejudice of the public.

It would be folly to close our eyes upon the fact, that the British public has committed a serious error, in permitting the Legislature to proceed from session to session, in the course of legislation which has prevailed in regard to railways. With an enlightened public, a vigilant and free press, an unrestricted right of discussion and petition, and the habit of the legislature to wait for the expression of public sentiment on such matters, it would be unjust to throw upon Parliament, or the administrations of the day, the exclusive blame of the mistake that has been committed. The public itself must bear the principal share of that blame. What is the actual state of the case? A new method of intercommunication was discovered, infinitely exceeding all former methods in cheapness, expedition, certainty, and regularity. Surely this rare opportunity ought to have been seized, to procure

the establishment by law of a suitable administrative body, under which a prudent system of inland communication might be constructed. But what, in fact, has been done? In this, the most active country in the world, with a press absolutely free, with unparalleled facilities for the diffusion of knowledge, and the most perfect of all representative governments, we have passively surrendered the entire system of national highways, without a single practicable reservation or exception, into the hands of a number of private individuals, to deal with us and our posterity, so far as respects our intercourse with each other, as may seem best to them and their heirs, now and for ever. England has ceased to possess highways. The country is intersected only by roads, which no one can use except by the permission and on conditions prescribed by their owners!

Although it be not till the eleventh hour, still, the attention of Parliament has been called to this most important subject; and measures are in progress which, it may be hoped, will correct these evils, as far as retrospective legislation can correct them. The right of Parliament to establish a system of reasonable control over the inland communications of the country, cannot, as we conceive, be denied. All practicable competitions having ceased to be possible, administrative control must supply its place. A Board of Railway Control must be established. But, to be really useful, it must be invested with powers much more extensive than those possessed by the late railway department of the Board of Trade. The great object of the government should be, to bring the power of such a body to bear on the existing railway companies, in such a manner as to protect the public from the abuses incidental to them, without violating in spirit that contract, whatever it may be, which they may have made with the State. The benefit of such a system of control, rightly administered, will not be confined to the public as opposed to the monopoly of the companies. It will extend to the companies themselves—some of which have already discovered that the maximum of profits is not necessarily attained by the maximum of fares; and that it is possible to consult the interests of the Public, by moderating their tariffs, without endangering their prospective dividends.

#### Lewiston and Waterville Road.

The Portland, (Me.) Advertiser says that, some very interesting statistical facts have been placed before the public in relation to this road, which cannot fail to have produced an impression favorable to the project. This is no visionary scheme—no idle speculation. But a grand, substantial, practical measure, which must give large and permanent prosperity to Maine. We do not fear contradiction when we say that it will form the grand trunk of railroad communication through the state. Before it is completed to Waterville, measures will be in progress to extend it to Bangor, where it will then have but half accomplished its object.

The length of the contemplated road from

the present terminus of the Atlantic and St. Lawrence road, to Waterville, is about 48 miles; the estimated cost of the road with all its equipment falls short of one million of dollars. The road extends into the midst of a fertile country, occupied by a busy, active and enterprising population; and taking all things together, the most productive in the state.—It passes through towns and villages full of manufacturing industry and resources, which send now to the sea board their thousands of tons of produce and manufactures, and their tens of thousands of passengers annually.

The road will command the business of the counties of Franklin and Somerset, and a considerable portion of Kennebec, Piscataquis and Waldo, to which it will afford facilities, which will give an immensely accelerated force to all their resources and energies. The people upon the whole line of the road and through the large region which will be opened to a market by it, are prepared for action. They have already resolved that the work shall be done. They have commenced a liberal subscription toward it, to which liberal additions will be made. They ask of Portland to respond to this noble effort; they say, give us \$100,000 or \$150,000, and we will soon send into your beautiful city, trains of freight and passengers which will astonish the incredulous.

And will not Portland heartily respond to this patriotic call? It is but loaning the money on the best security. The recent dividends of 4 per cent. semi-annually, in the Lowell, Providence, Worcester, Taunton Branch and Eastern roads invite us to invest; and from a careful comparison of all the statistics relating to this projected road and those of Massachusetts, we do not hesitate to say that the stock in none of them will go before that in the Lewiston and Waterville company for the amount of profit.

By a vigorous action now, we shall secure this great privilege: we strengthen the hearts and hands of its friends in the country, and give it an impetus which will push it through every obstruction.

We hazard the prediction, which may seem bold to some, that when this road is completed, or even before, a branch will be made to Gardiner or some other point on the Kennebec, which will afford a cheaper mode of communication than any they will otherwise have between the river towns, and Portland and Boston.

Railroads are the great works of our day; they furnish the most desirable means of investment; they open uncultivated lands to a profitable and useful culture; they give life, activity and value to unemployed water power, dormant energy and capital; they build up waste places, increase the power and prosperity of states, and promote national aggrandizement.

Let the people of Portland come forward now and aid this great enterprise, which will give a permanent prosperity to all their interests. They have done nobly for the great Canada road, and for the iron company which is to put on it, the winged steeds; "Once more into the breach my friends, once more!"



Correspondents will oblige us by sending in their communications by Tuesday morning at latest.

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AMERICAN RAILROAD JOURNAL.

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Saturday, January 9, 1847.

PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.—1847.

Winter Arrangement.

Philadelphia for Baltimore... 8 a.m. and 4 p.m.  
Baltimore for Philadelphia... 9 a.m. and 8 p.m.  
Connecting in Baltimore with Mail Lines south and west, as per notice of the Baltimore and Ohio Railroad—and with Mail Lines north from Philadelphia, both morning and afternoon.

Sundays, the Morning Lines do not run in either direction.

Accommodation train from Wilmington to Philadelphia, leaves Wilmington at 8 a.m., and returns at 3 p.m.  
J. R. WIMBLE,  
2d Engineer and General Superintendent.

Little Miami Railroad.  
Superintendent's Report.

In another portion of this day's Journal, appears the Superintendent's Report of the Little Miami Railroad Company, for 1846. The reader is referred to the official document, for the details of the condition of this road—by which it will be found that the receipts have reached a higher amount than was looked for, at the last annual report—though the amount does not come up to the maximum, which the business of the country would have guaranteed, but which has been lost to the road, on account of the deficiency of their motive power. An additional business is brought to this road, by the opening of the line to Springfield, but a very serious accident which occurred by a collision on the 13th of August last, the failure of the builders to furnish (as per contract) certain locomotives and cars, in season for the fall trade, and other causes, duly enumerated—account for the deficiency of the receipts; matters which will be corrected at an early day, if the recommendations of the able superintendent are acted upon. Mr. CLEMENT has exhibited the most untiring energy in the discharge of his duties as Superintendent upon this road, and we are glad to learn that the prospect ahead, promises very favorably for the company.

Central (Pa.) R. on the Canal Towing Path.

We find, in a recent number of the United States Gazette, a communication from F. P. Holcomb, Esq., in relation to the construction of the Central Railroad to Pittsburg, on the towing path, or bank, of the canal. He goes into the calculation, and makes it appear that the cost of construction—in the event of using the Portage railroad as a part of the line—will be much less, and the line much better, than by any other route yet indicated. He might also have said—what is equally important—that it can be completed in less than half the time of any other line.

If Mr. Holcomb's suggestions meet with equal favor in this, as in another case—we refer to the New Haven canal—he may consider himself highly complimented. By referring to the tenth volume, page 360—or the number for June 15, 1840—of the Railroad Journal, will be found a communication dated "Engineer Camp, Central Railroad, Georgia," in which he recommends the construction of

a railroad along the canal to Northampton, and gives an estimate of its cost. Little disposition, it is true, was then manifested to carry out this suggestion; and years passed before it was acted upon; but the work is now in course of construction, for at least a part of the way; and so may his more recent proposition meet with favor. We shall give his letter at length in our next—long as it is for our pages—that he may speak for himself.

Iron Rails in England.

We are indebted to an eminent mercantile firm in New York, for the following extract of a letter, giving the results of practical experience in England on this subject. They say "it has been ascertained by practical experience in England, that the rail, necessary for rapid movement over it, or for the conveyance of merchandise, should be heavier than the rail now in use there. The extract from a letter now before us—written by a practical and intelligent gentleman in England, largely interested in railroads now under construction in the United States, and of course desirous that said roads should be well constructed for speed and heavy traffic—says, (under date of 2d December, ultimo:) 'The experience we have obtained here, is, that the usual weight of iron heretofore used, of say sixty-five pounds to the yard—will not suffice for the rails—if the speed of travel and weight of traffic is to be carried forward. Our express trains now travel from forty-five to fifty miles per hour, and carry enormous weight of merchandise, which has already led to the necessity of changing the weight of rail to eighty pounds per lineal yard—and many are calculating on the necessity of going to one hundred pounds per yard—as a matter of economy to guard against the necessity of taking up a lighter and laying down a heavier rail. We call your attention to these points, and request you to so state it to the companies now constructing roads, in which we may be stockholders—that they may avail of our experience in this country as a guide to a right construction of a road intended for rapid travel and conveyance of produce and merchandise.'

Our own observation has led us to the same conclusion; and we have no doubt but that, on all our main lines, rails of 75 to 100 lbs. to the yard will be ultimately used; it is therefore important that they should, as far as possible, be constructed originally with the heavy rail.

Atlantic and St. Lawrence Railroad.

In reply to our request, we have the following interesting letter, dated Portland, December 26, 1846, from Mr. Septimus Norris. He says:—"According to promise, I now beg to hand you, enclosed, a map, showing the different railroads connecting the Atlantic cities with the western lakes; and, at one glance, it will be perceived Portland has by far the greatest and most unquestionable advantages over any other Atlantic city, being but 280 miles—Boston 525—New York 475. I would suggest to you the propriety of having a wood cut made of a map half the size sent you, showing the different routes—and, as I can get no better or more correct information, I have the consent of A. C. Morton, Esq., chief engineer of the Atlantic and St. Lawrence railroad, to make my extracts from his report, a copy of which I also send you."

There is but one summit, or main dividing ridge, between the waters which flow into the St. Lawrence and those flowing into the Atlantic; and the approach to the summit is through the valleys of large streams, affording long and easy slopes for overcoming its elevation. The principal highlands intervening between the St. Lawrence and the At-

\* We have received the map, but not the report alluded to.

lantic, are the White and Green mountain ranges. The former is crossed through the valley of the Androscoggin and Ammonoosuck rivers, with no inclination exceeding 40 feet per mile; with but a slight undulation in the grade of the road, and no heavy work whatever. The latter extends into Canada, but falls off as it approaches the St. Lawrence basin, and is principally avoided by following the valley of the St. Francis and Black rivers. There is no line of equal extent, connecting the western waters with the Atlantic which will compare with this for the great extent of easy grades, straight lines and cheap construction. While other lines are subjected to great disadvantages from steep grades, abrupt curvature and excessive cost, this is happily exempt from nearly all.

A large portion, equal probably to one-half the whole of this road, will be either level or of inclinations not exceeding 20 feet per mile. The curvatures are all easy, and nearly equivalent to a straight line. Passenger trains may pass on the whole road in the space of ten hours, and the largest class freight engines will be able to transport 200 tons over the road in either direction.

As regards the cost of transportation on the St. Lawrence and Atlantic railroad, the most satisfactory information would be gained by comparing it with some line of nearly equal extent and facilities and designed for general trade.

Perhaps no other road, at present in operation, approaches nearer to it, as it regards its object and design, than the Western railroad in Massachusetts; yet the cost of transportation on this road will much exceed the St. Lawrence and Atlantic, from the more unfavorable character of the grades and large amount of curvature. On the Western road there are three elevated summits, to surmount which the following grades are required, to wit:

3	miles of 60 feet per mile.
14	miles of 68 and 69 feet per mile.
5	6-10 miles of 74 feet per mile.
6	miles of 78 and 79 feet per mile.
2	miles of 82½ and 83 feet per mile.

The total rise and fall is over 4000 feet. The length of curved line on this road is 75½ miles, or 48 per cent. of its whole length, and the minimum radius 859½ feet.

Relative to the grades on the road from Montreal to Portland, the inclination probably, on one-half the whole distance, will not exceed 20 feet per mile. The maximum grade, as indicated by the surveys thus far, will be 50 feet per mile, and this is confined to comparatively a short distance. It is believed that from 80 to 90 per cent. of the whole road will be straight, and the curvatures will be easy.—In the comparison, therefore, of these roads, it is believed that we are fully sustained by the above facts in the conclusion that the cost of transportation on this road will not equal, but fall considerably below that on the Western road.

The gross receipts of the Western railroad for 1845, was.....£203,300  
The total expense of operation of the road for 1845, was.....92,655

The net income was.....£110,715

The St. Lawrence and Atlantic, and the Atlantic and St. Lawrence railroads,\* will be about 280 miles in length, 130 miles of which are in Canada, and the net annual income, supposing it to be in the same proportion as the Western road, and the cost of the road, £2,000,000, will be equal to an annual dividend of 10 per cent.

It will be observed that, in the above estimate of

\* The first extending from Portland to the line, and the latter from Montreal to the line.—En. R. R. J.



revenue, it is assumed that the cost of transportation on the Atlantic and St. Lawrence road will be as great as on the Western road, which evidently will not be the case. And it is also assumed that the cost of the whole road to Portland, will be two millions pounds currency; which is a much greater sum than it has been estimated to cost.

Applying as above, the business of the Western road for 1845 to the Atlantic and St. Lawrence, and assuming the cost of the road to be £1,750,000, the net revenue gives a dividend of 11½ per cent.

In the construction of the Western road, great obstacles were to be overcome. A mountainous section of country was to be crossed, requiring, as already stated, heavy grades and a large expenditure of money. To give an idea of the formidable obstacle encountered, I would state that one section of this road, known as the Mountain Division, comprising a distance of 14 miles, cost £245,000 or £17,500 per mile, and a single mile cost £51,982. The total cost of the road up to January 1, 1846, was £1,999,888.

In its business, it has to contend with a strong competition, with steamboats on the Hudson river and another railroad. Notwithstanding these unfavorable circumstances, the gross receipts in 1845 was, £203,307, and its net receipts for the present year, will probably equal a dividend of over 6 per cent. on its cost.

With reference to the Atlantic and St. Lawrence railroad, as a great thoroughfare, it occupies a most remarkable position, connecting, as it does, the St. Lawrence and the Atlantic, at a point where the New England coast approaches the nearest to the western waters, and having a large and populous city at either terminus, with capacious harbors and a rich intervening country, it cannot fail to be one of the most important and profitable roads yet commenced. From its peculiar position it never can be subject to competition. It is the shortest and cheapest channel through which the travel and trade of the provinces can reach the sea board.

With a long line of natural and artificial communication connecting Montreal with the western waters, and the far west, it cannot be doubted that the completion of this last link will change entirely the channel of trade; open new resources; and add vastly to the business of the public works of the province, and to the wealth and enterprize of the country through which it passes. To the city of Montreal it is of vital importance, situated, as she will be, at the foot of this long line of communication on the one hand, and within 10 hours ride of one of the best harbors of the Atlantic coast on the other, she must unavoidably receive large accessions to her trade and commerce, and a vast increase of wealth.

The foregoing, and an inspection of the map, will prove to any ordinary mind that Portland is destined to be a great commercial city, and will, in a few years, go far ahead of Boston.

You are, perhaps, aware, that I have received a contract from the Atlantic and St. Lawrence railroad for all the engines, car castings, etc., required for this road, all of which are to be built in Portland. I am also in treaty with them for the supply of all their rails, to be manufactured here.

A company has been chartered, and stock subscribed to the amount of \$250,000, called the Portland company, of which I have the appointment of director and chief engineer. We have purchased about eight acres of land in the city of Portland, having a wharf on the harbor of 900 feet, upon which our buildings are now erecting, and, by the 1st of April, I hope to have 500 operatives at work,

manufacturing rails, locomotives, cars, castings, etc., for the Atlantic and St. Lawrence railroad.—Portland has now become my home, and I assure you I have no regret at leaving Philadelphia, where I have resided for the last ten years, for I have been received here by the citizens with great cordiality, which makes me already feel at home.

I will, if you wish, again address you, giving you the progress of the Atlantic and St. Lawrence Railroad, etc., which, no doubt, will prove interesting.

Your friend, sincerely,

SEPTIMUS NORRIS.

#### Railroads—The Telegraph—Sundries.

We collate from our list of exchanges for the last week, the following items of interest.

The whole amount of the stock of the New York and New Haven road—\$2,500,000—has been subscribed without condition, and the contractors and engineers are busily engaged on the line preparatory to letting the sub-contracts.

From the late letter of Mr. McLane, president of the Baltimore and Ohio Railroad, the Pittsburg journals have discovered that their city was not to be benefited by the grant of the "right of way," so much as they supposed. Mr. McLane very frankly admits that the object sought was a connection with the Ohio river at a point much lower down than Pittsburg, and the connection with Pittsburg only a subordinate aim. The avowal has abated the zeal of the people of Pittsburg, and they are advised, through their journals, to cease to look forward to a connection with Baltimore, and direct their means and energies to other works—those of connection with Philadelphia or the lakes.

The New York Journal of Commerce states that upon the canal railroad, leading from New Haven to Collinsville, along the line of the Farmington canal, the grading is already commenced. On the line from New Haven to New York, it is to be commenced in a few days. The Hudson river railroad is gaining considerable accessions to its subscription list, and its friends are increasingly confident that it will be made, and that speedily. The Housatonic railroad gets nearly all the travel from Albany to New York. The Erie is going forward with a good deal of energy, and measures are in progress for connecting at several points by lateral railroads, with the railroad from Albany to Buffalo. A general convention of the friends of the Air line railroad from New Haven to Boston, is to be held at Middletown in the course of a week or two.

The bill to charter a railroad from Raleigh via Fayetteville, to Camden, S. C., as well as the bill to charter the Wilmington and Manchester road, have been passed by the North Carolina Legislature.—South Carolina (just adjourned) also granted similar charters.

We learn from the Kennebec Journal, that the citizens of Hallowell held a meeting at the town hall on Wednesday evening, on the subject of the railroad. A report was made of the state of the subscriptions in that town, and measures taken to increase them. The meeting was addressed by gentlemen of Hallowell, Gardiner and Augusta, and before adjournment, it was voted by acclamation that a mass meeting for the towns of Hallowell, Augusta and Gardiner be held on Saturday last, at 10 o'clock, at the town hall, and that the citizens of those towns, one and all, be invited to attend.

At a meeting on Monday evening last, at Bath, the project of a railroad from Portland to Augusta, Me., by way of Brunswick, with a branch to Bath, was considered by the citizens of that place; and it was resolved, unanimously, that the citizens of Bath

will have a railroad under the Portland and Kennebec charter; and that said road should eventually pass through Waterville to the Penobscot; and that they are opposed to any railroad from Portland to the Kennebec, that does not connect with Brunswick and the principal towns on the Kennebec river. It was also resolved, that it is expedient—and the directors are requested—to commence the railroad between Brunswick and Portland, as soon as in their opinion a suitable sum is subscribed therefor. This is a good move, and we are happy to see the disposition evinced in Maine, to have a railroad connection between their commercial city and the capital of the state.

We regret being obliged to allude to a most discreditable occurrence, which took place at the Tabernacle, in New York city, last week, upon the occasion of a meeting of the citizens there, to give Mr. Whitney a hearing upon the subject of his great railroad project to Oregon. However parties or communities may differ in opinion in regard to the feasibility, or present practicability, of this immense scheme, or in reference to its originators, we cannot but enter our protest against all attempts like the one we speak of, to injure the projector or the plan, by such means as seems to have characterized this scene. It appears from the New York accounts, that the meeting was called in due form, and the Mayor of the city was called to the chair, but while Mr. Whitney was explaining his views, there was considerable noise from certain of the national reform party gentlemen, who think that what the nation possesses, ought to be divided at once among the people! After Mr. Whitney had closed, a Mr. Ryckman made a speech against the plan. He had some resolutions which he would read, in spite of the call of his own party for a person named Shepherd.

The *Courier and Enquirer* adds that, "having got through these MS. resolutions, the cry for *Shepherd* was most tumultuously and uproariously renewed and continued—until it soon became manifest that no rational proceedings could be had, and after in vain endeavoring to restore order, or obtain a hearing, his honor the mayor, after consulting with some of the Vice Presidents, put on his hat, and with the other members of the meeting, left the platform, declaring the meeting dissolved. An instantaneous rush was made for the platform, by these friends of *equal rights* and universal agrarianism, and a Mr. Comerford began forthwith to hold forth to all who remained in the tabernacle; when, in the mid volley of his eloquence, the gas was turned off—and sudden darkness fell alike upon audience and orator. The effect was electric—with a shout of laughter, the disturbers turned from the invisible spectre and groped their way hastily into the wet streets.

"And thus disgracefully ended a meeting, invited under the most respectable auspices, of citizens, calmly to consider a great national project—in which this city has a special interest. The disturbers were men who, for the most part, have little or no interest in the city, and whose element of existence and notoriety seem only to be strife and opposition to all settled principles and established law.

"It was the triumph of agrarianism—lawless as landless—and well fitted to make reflecting men shudder, when a peaceful and legal meeting, for an honorable and patriotic purpose, could thus be converted into a bear garden."

Our regret for such an occurrence is most sincere. The great commercial emporium of the "Empire State" should do better—and treat a project of this character rather differently.



Governor Seward alludes to the great Central (Pa.) railroad as follows, in his late message. He says: "Some apprehensions have been expressed, that the construction of the great Central railroad, between Philadelphia and Pittsburg, may be the means of diminishing the income from the improvements of the state. In this I do not concur; on the contrary, I entertain the opinion, that the increased commerce which it will invite between our great eastern and western emporiums, and the regions which connect with them, will not only add to the revenue of the Columbia railway, but will greatly increase the productiveness of all our public works. Such, I believe, has been the experience of New York, and such, I doubt not, will, in a very few years, be that of our own commonwealth."

An exchange paper states that the first bar of American railroad iron was made in 1844, and there are now sixteen or eighteen mills, at which it is made; at the rate of about one hundred and twenty thousand tons per annum. This amount is sufficient to lay four miles of railroad per day, or twelve hundred miles per year. The progress of this manufacture, in the short space of two years, in this country, is very remarkable and is a striking manifestation of American enterprise and skill.

We perceive by a paragraph in the New York Sun, that Mr. Isaac Meikle, of Camden, N. J., is applying gun cotton to the propulsion of machinery in his factory. The engine is constructed on the ordinary horizontal steam engine, only there are two cylinders, one working in the other. The gun cotton is ignited by electricity, engendered and applied in a novel manner. Any degree of power may be obtained. It is said to be safer than the ordinary steam engine, and one person can run it.

Telegraph lines are being extended rapidly in all directions, and the time is not far distant when the extremes of our land—east, west, north and south—will be brought, by this means, within a few hours, perhaps minutes, of each other.

But a few days since, a message was transmitted along the lines from Buffalo by the way of New York and Philadelphia to Pittsburg, a distance of 950 miles by the wires, and an answer returned to the starting point in less than two hours, counting all detentions it met with at the different stations. Nineteen hundred miles were thus traversed in this short space of time by the message and the response!

The line between Philadelphia and Pittsburg is now in perfect order. A slight disarrangement caused a stoppage on Tuesday, which was obviated the next day, and the communication resumed. The Pittsburg papers publish every morning, the reports of the markets in Baltimore, Philadelphia and New York, up to the previous evening. This shows the great benefit of the Atlantic and Ohio Telegraph, and the energy and enterprise of the publishers.

Governor Young commenced reading his message at Albany at twelve o'clock on Tuesday, and at four o'clock in the afternoon, it was published entire in New York city, in an extra. The message contained 5,000 words, or 25,000 letters, and was written from two instruments in the Albany office, by Messrs. Carter, Buell and Johnson, and read in the New York office by the Messrs. Woods, at the average rate of 83 letters per minute, or two and a half hours for each instrument. Professor Morse's original estimate to Congress for the despatch with which communications could be sent by his telegraph, was thirty letters per minute; here we see the number almost trebled, in a long public document. The press had arranged to receive the message by two other routes, viz: one by horse down the

banks of the Hudson, and the other by the Housatonic railroad. The lightning came in first, the horse next, and steam last.

We learn from an exchange, that the New York and Buffalo line of telegraph company, have declared a dividend of three per cent. for the past four months. This is the first magnetic dividend ever declared. The earnings of the line have been about \$11,000 since 7th September, of which the expenses have absorbed about one-third. Of this dividend the patentees get \$3700, which may be considered the first practical result of this great discovery.—This line has now established the fact that magnetic telegraphs, when well managed, are a safe and profitable investment.

Cincinnati papers received up to January 4th, give some melancholy details of destruction, caused by a flood in the Big Miami on the 2d. Five lives were lost. The Cincinnati and Dayton canal is swept of bridges, and is broken and overflowed.—The Whitewater canal is almost irreparably damaged. The loss in lumber, flour, hogs and pork, is immense, and the destruction of mills, &c., is fearful.

The report of the engineer and superintendent of the Little Miami railroad will be found in this day's Journal. We have referred to it particularly, in another portion of our paper.

The interest evinced in the railroad direct from Boston to New York, is on the increase, and we are happy to find that the subject meets with general favor along the entire line of the proposed route.—We shall be greatly rejoiced when this important work is fairly under way, and present indications are decidedly favorable to its early consummation.

#### Pittsfield and North Adams Railroad.

We are indebted to William H. Power, Esq., superintendent, for the following statement.

"The winter arrangements on this road are as follows, viz:

Leaves North Adams, daily, at 8 A.M. & 4 P.M.  
Leaves Pittsfield " at 11 1/2 " & 8 "

"On the arrival of the train at noon at North Adams, stages leave for Williamstown, Hoosac, Pownal, Bennington, Manchester, Salem, Union Village, Rutland, &c."

"At Pittsfield, the trains connect, to and from, with all the W. R. R. trains, and with the mail line to Lenox and Lee.

"Length of road from North Adams to Pittsfield, twenty miles; fare sixty cents; time, one hour; stopping at South Adams and Cheshire, each way."

The contracts for the construction of this road were not made until the 20th December, 1845. It was completed and in use in 1846, and is now doing a very good and increasing business. Its extension to Rutland is not, we are sure, very distant.

#### Mining in Australia.

Within a few years past, a large number of the laboring portion of some of the mining counties of England and Wales, have taken passage for South Australia, and the emigration is increasing. The following letter, published in the London Mining Journal, is from a Mr. James Curnow, who left Cornwall for Port Adelaide in 1841, and is addressed to a friend in Penzance. If its statements be not highly exaggerated, South Australia is indeed the "land of promise!"

I now fulfil my promise, made on my leaving in 1841, of furnishing you with some information which may be useful to many of my friends in Cornwall, and others intending to proceed to this part of the world. I shall

carefully guard against any representation that may mislead, or exaggerate, and the facts I shall state may be relied on. The most attractive element of wealth now known in the colony, is unquestionably our minerals. The quantity of copper ore jutting out on the surface, is incredible, and I am confident is not equalled in any known part of the world. The quantity of ore raised at the Burra Burra copper mines, in six months, is 2900 tons, which produce has been obtained by 30 to 50 working miners—in fact it has not been mining, but more properly quarrying. The miners of Cornwall will easily understand the importance of this mine alone: I could enumerate eight or ten others, of a most valuable description—but this one will be sufficient to show the extraordinary nature of this province in a mineral point of view; as an illustration of which, I would direct attention to the quantity of ore shipped to England, including several cargoes direct to Swansea, in the short space of two years, with a mining population not exceeding 200.

\* \* \* \* \* The other metals found here are lead, silver, and gold—a rich vein of the latter having been found in several places in the virgin state. There are other metals reported to have been discovered, but which I have not yet seen—such as tin, quicksilver, platina, &c. The money paid to government within a short time, amounted to about £80,000; and on Saturday last, £30,000 worth of land was purchased at public auction for mining purposes. Besides this, one or two special surveys, of 20,000 acres each, are about to be secured by old settlers, in a new district, which is most important, as the breadth of the area of our mineral district will thereby be considerably extended. Ores having been found on the surface in numerous places for about 150 miles in length, running north, and about 80 to 90 miles in breadth, from east to west. In fact, on other parts settled, such as Port Lincoln, beyond these limits, various discoveries have been made, and yet we are comparatively ignorant of the real extent of our mineral wealth. The greatest want now felt, is the scarcity of labor of every description, but more particularly of working miners. I can state, from personal knowledge, that tributaries have been getting lately from £6 to £20 per week, and men that never saw a mine before, get £2 per week. These wages are further enhanced by the low cost of provisions and other necessities of life. To give some idea to those unacquainted with the variety of productions which abound in this colony, I may enumerate the articles of wool, grain, gum, bark, whalebone, and oil, which, themselves, are enough to make this a prosperous community. I think I may say with truth, that such a concentration of the elements of wealth that we possess, is without precedent. The climate of South Australia is most healthy. The general opinion in England as regards the supply of rain, is very incorrect. The experience of ten years shows that no real scarcity of water has been experienced during any one season. The hot winds which prevail during summer for a short time, are, I may say, the only drawback in this colony.



## Superintendent's Report.

OFFICE LITTLE MIAMI RAILROAD CO., }  
Cincinnati, December, 1846. }

To the President and Directors of the Little Miami Railroad Company.

GENTLEMEN—Below will be found a statement of the receipts and expenditures of the transportation department, for the year ending the 1st inst, together with such suggestions as the experience of the past year has furnished, in relation to the management of this department generally.

The receipts amounted to a larger sum than was anticipated at the date of the last annual report, but have not reached the maximum by a large per cent. which the business of the country would have allowed, had the motive power and car departments been adequate to meet the demands upon them. One only, of the four locomotives ordered last winter, has been placed upon the track in time to be of service, since the date of the last report.

This failure on the part of the builders, together with the collision of August 13th, which rendered useless for two months, the only effective passenger engines on the road, have been the fruitful sources of delay and embarrassment in the management of the road, and disappointment and loss to shippers.

The motive power is at present so deficient, compared to the demands upon it, that the most trifling accident, or the time required to make the ordinary repairs, which, under other circumstances, would not be worth a second thought, become matters of serious importance, inasmuch as the loss of a trip is involved.

Since the date of the last report, the wooden rails and cross-ties have been renewed for the distance of ten miles, between Milford and Foster's Crossings, in addition to the ordinary repairs on the remainder of the line. About an equal distance will require renewal in the same manner the coming year.

The six miles next to the city of Cincinnati, remain in the same condition as at the last report, with the exception of such repairs as were considered necessary to keep the track passable.

At several points on the lower part of the road, slides occur after heavy rains, which interfere with the business of the road during the winter months. About eight hundred lineal feet of wall has been put up to guard against these slides, and its erection will be continued as fast as circumstances permit.

I would again call the attention of the Board to the importance of relaying this portion of the road with an  $\square$  rail. Another season cannot be allowed to pass without relaying it in some manner. The thin iron at present in use upon it, can be taken for the additional side tracks rendered necessary by the increasing business of the road; which if not procured in this way, must be provided in some other, thus adding (in case an  $\square$  rail is not substituted at once) to the eventual cost of relaying with heavy iron.

The estimated cost of relaying with an  $\square$  rail, including materials, labor, ballasting road bed, etc., per mile, is as follows:

100 tons rails, chairs and spikes, at \$70. ....	\$7,000
Ballast.....	800
2300 locust ties, at \$40.....	920
Other materials and labor.....	900
	\$9,620
Less value of old materials, say.....	2,300
	\$7,320

The cost of repairs of machinery, superstructure and road bed make up an important item of the expenditures, and this will continue to be the case, with a large freight traffic on a light plate rail like ours. Four years is the extent of time that we can rely upon the best white oak timber as a string piece, and after the third year the track frequently requires extensive repairs. A sufficient quantity of timber is on hand and under contract to be delivered, for our probable wants the ensuing year.

The trestle work over the island at the Little Miami river has been braced and otherwise secured, but will require extensive repairs, or filling up with earth at an early day. All the materials for a bridge of the longest span on the line are being delivered, and so soon as the delivery is completed, the bridge will be framed and placed under roof, ready for any emergency that may occur.

Under the head of repairs of locomotives is included damages caused by the collision of the 13th August, and replacing the frame and fire-box of the "Governor Morrow."

The attention of the Board is earnestly called to the necessity of erecting suitable shops for repairing locomotives and cars.—As at present arranged, the cost of repairs is greatly increased over what would be necessary with convenient buildings, and is attended with useless delay in many instances.

Some arrangement should be made to reduce the grades in Front street and through Fulton, or to remove the track out of the street entirely. This last will undoubtedly be the better plan, if the means of the company permit, as the street is narrow, and constantly thronged with wagons and carriages. At present an extra locomotive is employed whenever the condition of the machinery will permit, and an extra set of hands all the time.

This expense would be entirely avoided, and a considerable saving made in wear and tear of machinery, by a change of location.

The machinery, with the exception of one locomotive, is in good repair. The motive power consists of:

- 1 10 ton, six wheeled engine;
- 1 12 ton, eight wheeled engine;
- 2 13 ton, eight wheeled engine;
- 3 15 ton, six wheeled engine, (connected;
- 1 16 ton, eight wheeled engine, freight, (upon the track, but not in use.)

One six wheeled connected engine, and one eight wheeled passenger engine, are now on their way via New Orleans, and three more, one freight and two passenger engines, are under contract to be delivered in May. There will be required in addition, one freight, and one passenger engine.

## NUMBER OF CARS.

8 wheeled passenger cars.....	7
8 wheeled baggage cars.....	3
8 wheeled freight cars.....	42
4 wheeled freight cars.....	51

Contracts have been made for 35 eight wheeled cars in addition.

Number of miles run by passenger, freight and gravel trains during the year.....103,950  
Average cost per mile run, including current expenses for all purposes.....62.3 cents.  
Passengers carried for the year.....54,265

Of this number, one lost his life in attempting to get on a train while it was in motion, at Milford, in December last. As far as is known no other passenger has received the slightest injury.

## RECEIPTS AND EXPENDITURES

On Account of Transportation, for the year ending 1st December, 1846.

For carrying passengers.....	\$51,190 11
For carrying freight.....	64,861 91
Total.....	\$116,052 02

## EXPENDITURES.

For renewing rails and ties on 10 miles of track, and the ordinary repairs on remainder of superstructure.....	\$10,960 04
For repairs of bridges.....	539 16
For repairs of road bed, ordinary and extraordinary.....	6,962 69
For repairs of cars.....	4,026 89
For repairs of locomotives.....	7,987 46
For repairs of machinery.....	227 87
For oil and tallow.....	1,204 86
For fuel.....	7,494 14
For rent.....	2,191 74
For loss and damage.....	654 82
For repairs of water stations.....	140 55
For transportation, expenditures, including wages, salaries, horse power, etc.,	22,372 68
Total.....	\$64,766 90

## RECAPITULATION.

Total rec'ts on account of transportation.....	\$116,052 02
Total expenditure.....	64,766 90

Total over current expenses.....\$51,285 12

A Statement of the Amount Received each Month in the Year, for Carrying Passengers and Freight.

	Passengers.	Freight.
1845 December.....	\$3,618 76	\$4,261 07
1846 January.....	2,782 10	6,013 21
February.....	2,446 45	5,285 96
March.....	3,071 65	5,295 70
April.....	3,442 11	5,404 63
May.....	4,130 17	3,630 33
June.....	4,346 58	3,108 21
July.....	5,083 04	2,857 97
August.....	5,976 59	6,242 16
September.....	5,966 17	5,900 65
October.....	6,007 78	9,206 06
November.....	4,318 71	7,646 96
Total.....	\$51,190 11	\$64,861 91

A Statement of the principal articles of Produce transported on the road, for the year ending 1st Dec. '46.

Apples, clover seed and eggs.....	barrels	2,677
Beef, pork and lard.....	"	12,245
Molasses, oil, vinegar, cider, etc.....	"	3,131
Whiskey.....	"	32,977
Wheat and buckwheat flour.....	"	81,251
Lime.....	"	4,346
Salt.....	"	7,337
Empty barrels and kegs.....	"	5,084
Merchandise, sundries and furniture.....	pounds	6,146,096
Iron and nails.....	"	2,305,105
Pork and bulk meat.....	"	2,835,625
Paper and rags.....	"	491,133
Butter.....	"	368,413
Castings.....	"	225,474
Hay.....	"	87,701
Lumber.....	M feet B. M.	313,211
Hoop poles and staves.....	M	212,607
Shingles.....	"	1,631,350
Malt.....	sacks	3,550
Barley and oats.....	bushels	14,772
Corn, wheat and rye.....	"	121,270
Potatoes and turnips.....	"	3,229
Coal and coke.....	"	40,894
Live hogs.....	number	4,791



Two additional water stations have been erected on the lower part of the road during the past year, and the number will still require to be increased, in order to prevent, as far as possible, delay in bad weather. Some irregularities have occurred in the arrival of the mail during the latter part of the year, in consequence of the inefficient class of engines we have been obliged to employ, and the utter impossibility, with the small number in the possession of the company, of keeping them in working condition. The number and class of the locomotives ordered and on their way, for the use of the road, will furnish, it is presumed, an effectual remedy; and no doubt is entertained but that all just ground for complaint will be removed in a few weeks.

The time allowed by the card between Cincinnati and Springfield is five hours, forty minutes. This includes the delivery of the mail from the postoffice to the depot, and 14 miles of horse power, and requires an average speed of 16 miles an hour, including stoppages after the locomotive is attached. This, it is believed, is as high a rate as a proper regard for the preservation of the road and machinery will permit.

The total length of the main track is 84 miles.

*A Statement of the Quantity and Average Cost of Earth Work and Masonry on the Little Miami Railroad, up to 1st December, 1846.*

Yards.	Average Cost
977,585 Embankment.....	10 49-100 cents per yard
809,847 Excavation.....	10 38-100 "
24,588 Loose rock excavation.....	21 98-100 " "
9,004 Excavation in foundations.....	20 73-100 " "
47,409 Ballast.....	18 94-100 " "
Perches.	
15,634 Wet masonry.....	\$2 88 12-100 " per perch.
7,280 Dry ".....	1 38 73-100 " "
7,724 "Rip Rap".....	38 68-100 " "

Respectfully submitted,

W. H. CLEMENT,  
Superintendent and Engineer.

#### (Official) Reading Railroad.

A comparative statement of the business on the Philadelphia and Reading railroad for the week ending—

	Jan. 4, 1845.	Jan. 6, 1846.	Jan. 7, 1847.
Travel.....	\$1,503 76	\$1,726 91	\$2,538 75
Freight on goods. 1,263 27	2,022 41	2,521 05	
" coal... 5,056 78	9,471 95	22,937 51	
	\$7,822 81	\$13,221 57	\$27,997 31
Coal trans.—tons. 3,959	2,254	15,377	

#### Miscellaneous Items.

A very extraordinary event has just taken place in the works connected with the Scottish Central railway. It was necessary to erect an embankment fifty feet high in a field near Allan bridge, where the railway was to pass. The work was accordingly commenced, and many thousand loads of earth were piled in the requisite place; the work was then left for the purpose of acquiring solidity, but upon visiting it again it was found to have disappeared with the exception of a few feet. On inquiry it was found that the field had originally been a bog, and the weight of the soil necessary to form the embankment had broken through the external solid earth.—*English paper.*

*The Coal Trade.*—The Miners' Journal, of Saturday last, published at Pottsville, Pa., says:

"With this week we close the coal trade of this region for the year 1846. In January last, the managers of the railroad company estimated the capacity of the road at 1,250,000 tons for the year—the quantity sent is 1,233,561 11 being only 16,438 09 tons less than the estimate. The estimate would have been exceeded if the trade had not been retarded in July by the passage of the new tariff bill, and the unusual and unexpected freshet which occurred in June.

The quantity sent to market from all the regions in 1846, is in round numbers 2,238,000 tons, against 2,053,633 tons in 1845, being an increase in 1846 of 312,000 tons.

*Erie Railroad Company.*—The N. Y. Herald says, that, on reference to the quotations of the old stock of the Erie Railroad Company, that there has been within the past week or two an advance of fourteen per cent in the market value. This has been caused by the announcement that the board of directors had determined to pay interest on this stock, as soon as the road was completed to Binghamton. According to the existing appearance of the work on the road, it will be finished to that point in about two years. The directors do not say whether the payment of interest at that time will depend upon the income of the road, or whether it will be paid out of the new capital of the company, but we are informed that the intention is to pay the interest at any rate, whether there are any surplus receipts or not. When this road is completed to Binghamton, the three millions of dollars subscribed under the new charter, will be expended in interest and in constructing the road; the interest on which, at the rate of six per cent per annum, will have to be paid, making an expenditure under this head of one hundred and eighty thousand dollars per annum. The par value of the old stock in the market is seven hundred and fifty thousand dollars, and the amount of bonds outstanding, about five hundred thousand more, making an aggregate of twelve hundred and fifty thousand dollars, the interest on which at six per cent would be seventy-five thousand dollars per annum, making, with the interest on the \$3,000,000, an aggregate for interest alone of \$255,000 per annum.

*A Great Printing Machine.*—The Brooklyn Eagle, says, "the Messrs. Dryden, the celebrated English engineers, are employed in the construction of a printing machine for the London Times, to produce 12,000 impressions per hour, or the inconceivable number of upwards of three sheets per second!" and the New York Sun thinks that a machine will be produced in that city, capable of printing between fifteen and twenty thousand copies an hour. So do not we, notwithstanding the Sun says, that "good mechanics think it can be done." We do not believe it possible, because the sheets have to be separated and laid on the machine

singly by human hands—at least we have seen no machine where this labor has been otherwise performed—and we consider it utterly impossible that any man, whatever may be his dexterity, can separate and place on the machine three or four sheets per second. Nor do we think it likely that this duty will ever be discharged by mechanism. It has been tried by the most ingenious machinists in New York, but failed, because the operation requires mind.

*Improvements at Worcester.*—At a town meeting in Worcester, on Saturday, it was voted to allow the Boston and Worcester Railroad Corporation to close part of a street, in order to effect certain improvements, which are mentioned in the following, from the Worcester Palladium:—

"It is understood that all the railroad companies, now chartered here, will enter into the arrangement proposed by the Boston and Worcester Company; and that if they do so, that company will then go forward and make the proposed heavy expenditures; hold the property involved; and lease out depot accommodations to the other companies. The plan for the depot contemplates the erection of a substantial fire-proof building, 600 feet in length, and a part 80 feet, and other parts 100 feet in width; built upon a segment of a circle; with ample accommodations for the three roads now in operation, and the two others in progress; and admitting of an easy and ready passage of cars from any one to any other of the five. The great convenience of such an arrangement, for the public accommodation, cannot be over-estimated. Another part of the plan contemplates the concentration of the freight houses of all the roads near Washington Square, which, it is believed, will tend largely to a liberal growth of the town in that direction.

*Express Train to Utica.*—A Rochester paper says, "that the Utica and Schenectady Company intend in the spring to commence running an express train to Utica without stopping. If the rest of the companies come into this arrangement, Rochester will be reached in eight or ten hours, and Buffalo in twelve. The through mails can be sent by this train, and the business public will be greatly accommodated. The Tonawanda has already agreed to come into the arrangement; and it remains to be seen whether the rest of the roads will do likewise. The two central roads will endeavor to excuse themselves on the ground that their structures are too frail to allow a train to pass over at so rapid a rate. This may be the case; but they must re-construct their roads in a manner to meet the wants of the public, or witness a constant depreciation of their stocks, by the agitation of rival projects. When the southern line is finished, travel will seek that route, rather than run the risk of delays by taking the central line. We hope the arrangement proposed by the Utica road will meet with favor all along the line.



**Commerce of the New York Canals.**—A table of the commerce of the New York Canals for the last two years is published in the Albany Argus, which shows the following comparison:

From and to the Hudson River during the year 1845 and 1846, and the aggregate value of the property transported.

1845.	1846.
Tonnage, 1,428,956 tons.	1,601,335 tons.
Value, \$100,906,319.	\$115,732,780.

It will be seen that there is an increase in the tonnage of 172,579 tons, and of \$14,826,461 in the value of the property transported, and the excess both in tonnage and value over previous years is still greater.

The value of the entire movement of property from and to the Hudson, says the Argus, is greater by \$4,490,353 than the exports of the United States for the fiscal year ending July, 1844, and greater by \$7,297,845 than the value of the goods imported into the U. States for the same time.

**A Railroad from the Lakes to the Mississippi River.**—The citizens of Milwaukee are about to organize a Company to make a railroad from Milwaukee to the Mississippi. The country over which the road is to pass is said to be very favorable for the construction of a road, having but slight elevations, and but few rivers to cross. It would pass through a section of country illimitable in its agricultural resources, and which is now nearly worthless, for the want of a market for its products.

**Iron in Tennessee.**—The first iron manufactured in Tennessee, has been made at the Tennessee Valley Works, about fifty miles from the mouth of the Cumberland. The articles have been pronounced by competent judges, to be of very superior quality. These works have been built upon an enlarged scale, combining all the advantages such establishments can possess.

**Mining in New Jersey.**—Glowing statements of the copper mines at Flemington, New Jersey, have been recently given:

"From all that we can learn, the copper mines of Flemington, in Hunterdon County, are certain to be mines of wealth to the possessor. We understand that over twenty tons of the richest ore have been mined within the last three days. A specimen of the ore has been sent us by Mr. Whitaker, of this city, who received it from Gen. Hunt, one of the leading capitalists in this Company. It contains 50 per cent. of copper, is worth \$156 per ton at the mines. Mr. Whitaker tells us that the mining is done by contract at the rate of \$3 per ton. Besides this richest quality of ore, there is a kind which has a large admixture of rock and which affords only 20 per cent. of pure copper. Large quantities of this quality are also mined, and the prospects of the Company are certainly flattering in the extreme."—*Trenton News.*

**RAILWAY IRON.—THE BEST QUALITY** of English Heavy H Rails—60 lbs. to the yard—now in store, landing from the vessel, and on shipboard to arrive, for sale on most favorable terms by **DAVIS, BROOKS & CO.,** Jan. 2. [44] 68 Broad St., New York.

**SPRING STEEL FOR LOCOMOTIVES.** Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1½ to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

**JOAN F. WINSLOW, Agent,** Albany Iron and Nail Works,

**RAILROAD IRON.—THE NEW JERSEY** Iron Company, Boonton, N. J., are now preparing to make Railroad Bars, and are ready to take orders or make contracts for Rails, deliverable after the first of December next. Apply to

**FULLER & BROWN, Agent,** No. 139 Greenwich, corner of Cedar street. September 18, 1846. 1039

**NICOLL'S PATENT SAFETY SWITCH** for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee **G. A. NICOLLS,** Jan 5 Reading, Pa.

**RAILROAD IRON.—THE SUBSCRIBER'S** New Rail Iron Mill at Phoenixville, Pa., is expected to be ready to go into operation by the 1st of September, and will be capable of turning out 20 to 40 tons or finished Rails per day. They are now prepared to receive orders to that extent, deliverable after the 1st of October next, for heavy rails of any pattern now in use, equal in quality and finish to best imported.

**PIG IRON.**—They are also receiving weekly 150 to 200 tons of No. 1 Phoenix Foundry Iron, well adapted for light castings.

**REEVES, BUCK & CO.,** 45 North Water St., Philadelphia, or by their Agent, **ROBT. NICHOLS,** 79 Water St., New York.

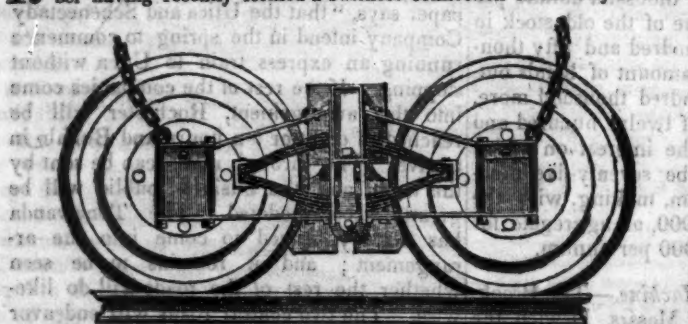
**THE SUBSCRIBERS, AGENTS FOR** the sale of Codorus, Glendon, Spring Mt and Valley, Pig Iron.

Have now a supply, and respectfully solicit the patronage of persons engaged in the making of Machinery, for which purpose the above makes of Pig Iron are particularly adapted.

They are also sole Agents for Watson's celebrated Fire Bricks and prepared Kaolin or Fire Clay orders for which are promptly supplied.

**SAML. KIMBER, & CO.,** 59 North Wharves, Jan. 14, 1846. [1y4] Philadelphia, Pa.

**RAY'S EQUALIZING RAILWAY TRUCK.—THE SUBSCRIBER** having recently formed a business connection in the City of New



York, expressly for the manufacture of the newly patented and highly approved Railroad Truck of Mr. Fowler M. Ray, is ready to receive orders for building the same, from Railroad Companies and Car Builders in the United States, and elsewhere.

The above Truck has now been in use from one to two years on several roads a sufficient length of time to test its durability, and other good qualities, and to satisfy those who have used it, as may be seen by reference to the certificates which follow this notice.

There have been several improvements lately introduced upon the Truck, such as additional springs in the bolster of passenger cars, making them delightful riding cars—adapting it to tenders, trucks forward of the locomotive, and freight cars, which, with its original good qualities, make it in all respects the most desirable truck now offered to the public.

Orders for the above, will, for the present, be executed at the New York Screw Mill, corner 33d street and 3d avenue, (late P. Cooper's rolling mills) and at the Steam Engine Shop of T. F. Secor & Co., foot of 9th street, East

river, (of which firm the subscriber was late a partner) under the immediate supervision of Mr. Ray himself.

Several sets of trucks containing the latest improvements have recently been turned out for the New York and Erie railroad, and the New Jersey Transportation company, which may be seen upon said roads.

The patronage of Railroad Companies and Car Builders is respectfully solicited.

New York, May 4, 1846. **W. H. CALKINS, and Others.**

To all whom it may concern:—This is to certify that the New Haven, Hartford and Springfield railroad co., have had in use six sets of F. M. Ray's patent trucks for the last 20 months, during which time it appears to me, they have proved to be the best and most economical truck now in use.

[Signed,] **WILLIAM ROE, Supt. of Power.** I certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Philadelphia and Reading railroad for some time past, under a passenger car.

For simplicity of construction, economy in cost, lightness of material, and extreme ease of motion, I consider it the best truck we have ever used. Its peculiar make also renders it less liable to be thrown off the track, when passing over any obstruction. We intend using it extensively under the passenger and freight cars of the above road.

Reading, Pa., October 6, 1845. [Signed,] **G. A. NICOLL,** Supt. Transportation, etc., Philadelphia and Reading Railroad.

To all whom it may concern:—This is to certify that the N. Jersey Railroad and Transportation company have used Fowler M. Ray's Truck for the last seven months, during which time it has operated to our entire satisfaction. I have no hesitation in saying that it is the simplest and most economical truck now in use.

[Signed,] **T. L. SMITH,** Jersey City, November 4, 1845. N. Jersey Railroad and Transp. Co.

This is to certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Long Island railroad for the last year, under a freight car.

For simplicity of construction, economy in cost, lightness of material and ease of motion, I consider it equal to any truck we have in use.

Long Island Railroad Depot, Jamaica November 12, 1845. [Signed,] **JOHN LEACH,** Supt. Motive Power.





# **RICH & CO'S IMPROVED PATENT SALAMANDER SAFES.**

Warranted free from dampness, as well as fire and thief proof.

Particular attention is invited to the following certificates, which speak for themselves:

## **TEST No. 10.**

*Certificate from Mr. Silas C. Field, of Vicksburg, Mississippi.*

On the morning of the 14th ult., the store owned and occupied by me in this city, was, with its contents, entirely consumed by fire. My stock of goods consisted of oil, rosin, lard, pork, sugar, molasses, liquors, and other articles of a combustible nature, in the midst of which was one of Rich's Improved Patent Salamander Safes, which I purchased last October of Mr. Isaac Bridge, New Orleans, and which contained my books and papers. This safe was red hot, and did not cool sufficiently to be opened until 16 hours after it was taken from the ruins. At the expiration of that time it was unlocked, when its contents proved to be entirely uninjured, and not even discolored. I deem this test sufficient to show that the high reputation enjoyed by Rich's Safes is well merited.

S. C. FIELD.

## **TEST No. 11.—Certificate.**

By the fire which occurred in this village on the 27th July last, our Law Office, together with many other buildings, was destroyed—we had in our office one of Rich's Improved Patent Salamander Safes, which, though heated red hot, preserved, without being the least damaged, many papers valuable to our clients—the envelopes of a few papers being slightly scorched. Some twenty-four hours after the fire, the safe was removed, and so hot was it, that several hours were required for it to cool off. Our office was in the second story of a large brick building, all the wood used in construction of said house being pitch pine. While the safe was red hot, one of the walls tumbled in, and so injured the lock that it was necessary to break the door open. From this test, we feel no hesitancy in recommending "Rich's Patent Salamander Safe" as entirely fire proof.

GORE & KING.

Marion, Ala., Sept. 15th, 1846.

*Still other Tests in the Great Fire of July 19, 1845.*

The undersigned purchased of A. S. Martin, No. 138 1/2 Water street, one of Rich's Improved Patent Salamander Safes, which was in our store, No. 54 Exchange place. The store was entirely consumed in the great conflagration on the morning of the 19th inst. The safe was taken from the ruins 53 hours after, and on opening it, the books and papers were found entirely uninjured by fire, and only slightly wet—the leather on some of the books was perched by the extreme heat.

RICHARDS & CROWHITE.

Benton, Miss., December 27, 1845.

One of Rich's Improved Salamander Safes, which I purchased on the 2d of June last of A. S. Marvin, 138 1/2 Water street, agent for the manufacturer, was exposed to the most intense heat during the late dreadful conflagration. The store which I occupied, No. 46 Broad street, was entirely consumed; the safe fell from the 2d story, about 15 feet, into the cellar, and remained there 14 hours, and when found, I am told, and from its appearance afterwards, should judge that it had been heated to a red heat. On opening it, the books and papers were found not to have been touched by fire. I deem this ordeal sufficient to confirm fully the reputation that Rich's safe has already obtained for preserving its contents against all hazards.

(Signed.)

WM. BLOODGOOD.

New York, 21st July, 1845.

Reference made to upwards of nine hundred and fifty merchants, cashiers, brokers, and officers of courts and counties, who have Rich's Safe's in use.

The above safes are finished in the neatest manner, and can be made to order at short notice, of any size and pattern, and fitted to contain plate, jewelry, etc. Prices from \$50 to \$500 each. For sale by

A. S. MARVIN, General Agent,

138 1/2 Water st., N. Y.

Also by Isaac Bridge 76 Magazine street, New Orleans.

Also by Lewis M Hatch, 130 Meeting street Charleston, S. C.

# **FRENCH AND BAIRD'S PATENT SPARK ARRESTER.**

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved SPARK ARRESTER, recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger and freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

R. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendent Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendent Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburg and Jackson Railroad, Vicksburg, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hinckley & Drury, Boston, will be promptly executed.

FRENCH & BAIRD.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

Philadelphia, Pa., April 6, 1844.

••• The letters in the figures refer to the article given in the Journal of June, 1844. ja45

## **PATENT HAMMERED RAILROAD, SHIP**

and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed.

JOHN F. WINSLOW, Agent.

Albany Iron and Nail Works, Troy, N. Y. The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Eting, Philadelphia; Wm. E. Coffin & Co. Boston. ja45

## **MACHINE WORKS OF ROGERS,**

Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and despatch.

### **Railroad Work.**

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

### **Cotton, Wool and Flax Machinery**

of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR, 45, Paterson, N. J., or 60 Wall street, N. York.

## **PATENT RAILROAD, SHIP AND BOAT**

Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York will be punctually attended to.

HENRY BURDEN, Agent.

Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal low merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

••• Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand. ja45

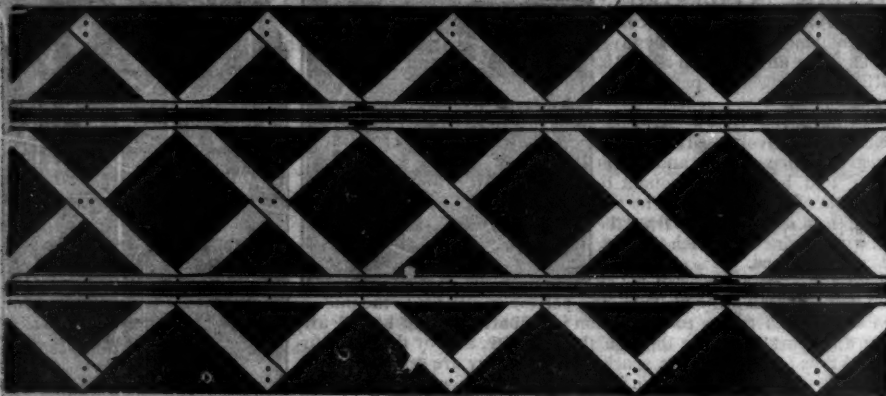
## **DAVENPORT & BRIDGES CONTINUE**

to Manufacture to Order, at their Works, in Cambridgeport, Mass., Passenger and Freight Cars of every description, and of the most improved pattern. They also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices. All orders punctually executed and forwarded to any part of the country.

Our Works are within fifteen minutes ride from State street, Boston—coaches pass every fifteen minutes. 171



## THE HERRON RAILWAY TRACK,



As seen stripped of the top ballasting

A GOLD MEDAL AWARDED THE INVENTOR BY THE AMERICAN INSTITUTE.

**THE UNDERSIGNED RESPECTFULLY** invites the attention of Engineers, and Railroad Companies, to some highly important improvements he has recently made in the Herron system of Railway structure. These improvements enable him to effect a very large reduction in the quantity of Timber, and cost of construction, without impairing the strength of the Track, or its powers of resisting frost, while they secure additional features of excellence in the Drainage and facility of making Repairs.

The above cut represents the "Herron Track" as it is laid on the Philadelphia and Reading, and on the Baltimore and Susquehanna Railroads. The intersection of the sills of the trellis is 5 feet from centre to centre, while in the new construction they are only 2½ feet. This renders the string piece unnecessary, thus removing the only objectionable feature found in the Track.

The result of experience has proved that all Tracks constructed with longitudinal timbers, such as mud sills, and more especially, the continuous bearing string pieces retain the rain water that falls between the Rails, which, being thus confined, settles along those timbers, and accumulating in quantity flows rapidly along them on the descending grades, washing out the earth from under the timber, and frequently causing large breaches in the embankments of the road. Whereas all water intercepted by the oblique sills of the trellis, is discharged immediately into the side ditches.

In the 5 foot plan, the Track occupies a Road bed nearly 11 feet wide, while the new construction takes

but 8 feet; the timber being more concentrated under the Rails. A block of hard wood, about 2 feet long and 15 inches wide, is introduced into a square of the trellis for the purpose of giving an additional, and effectual support to the joints of the Rails, which rest upon it. Should these joint blocks become chafed and worn by the working, and imbedding of the chairs, as is now the case on all Railroads, they can be readily replaced without any derangement of the timbers less liable to wear.

The following is a general estimate of its cost near the seaboard. In the interior it will be considerably less.

ESTIMATE OF THE PROBABLE COST OF ONE MILE.	
4,224 Timbers, 11 ft. long, 3 x 6 inches =	68,696 ft. b.m., at \$10 = \$686 96
587 Oak joint blocks 2 ft. x 3 x 15 in. =	4,403 ft. b.m., at \$13 = 57 94
13,000 Spikes = 2,250 lbs. at 4½ cts =	101 25
Workmanship free of patent charge =	600 00

Cost of one mile including the laying of the Rail ..... \$1,445 45

He has made other important improvements, which will be shown in properly proportioned models, that give a much better idea of the great strength of the Track than a drawing will do.

Sales of the Patent right to all the distant States will be made on liberal terms.

JAMES HERRON.

Civil Engineer and Patentee.

No. 277 South Tenth St., Philadelphia. 33tf

## ENGLISH PATENT WIRE ROPES—FOR THE USE OF MINES, RAILWAYS, ETC.—

For sale or imported to order by the subscriber.

These Ropes are manufactured on an entirely different principle from any other, and are now almost exclusively used in the collieries and on the railways in Great Britain, where they are considered to be greatly superior to hempen ones, or iron chains, as regards safety, durability and economy. The plan upon which they are made effectually secures them from corrosion in the interior, as well as the exterior of the rope, and gives a greater compactness and elasticity than is found in any other manufacture.

Many of these ropes have been in constant operation in the different mines in England, and on the Blackwall and other inclined planes, for three and four years, and are still in good condition.

They have been applied to almost every purpose for which hempen ropes have been used—mines, heavy cranes, standing rigging, window cords, lightning conductors, signal halyards, tiller ropes, etc. Reference is made to the annexed statement for the relative strength and size. Testimonials from the most eminent engineers in England can be shown as to their efficiency, and any additional information required respecting the different descriptions and application will be given by

ALFRED L. KEMP,

75 Broad street, New York, sole agent in the United States.

Statement of Trial made at the Woolwich Royal Dock Yard, of the Patent Wire Ropes, as compared with Hempen Ropes and Iron Chains of the same strength.—October, 1841.

WIRE ROPES.			HEMPEN ROPES.			CHAINS.		STRENGTH
Wire gauge number.	Circumference of rope.	Weight per fathom.	Circumference of rope.	Weight per fathom.		Weight per fathom.	Diameter of iron.	
	INCH.	LS. OZ.	INCH.	LS. OZ.		LS.	INCH.	Tons.
11	4½	13 5	10	24 -		50	15-16	20
13	3½	8 3	8½	16 -		27	11-16	13½
14	3½	6 11	7½	12 8		17	9-16	10½
15	2½	5 2	6½	9 4		13½	1-2	7½
16	2½	4 3	6	8 8		10½	7-16	7

N.B. The working load, with a perpendicular lift, may be taken at 6 cwt. for every lb. weight per fathom, so that a rope weighing 5 lbs. per fathom would safely lift 3360 lbs., and so on in proportion. 1y24

ENGINEERS' AND SURVEYERS' INSTRUMENTS MADE BY EDMUND DRAPER, Surviving partner of STANCLIFF & DRAPER.



No 23 Pear street, below Walnut, 1y10 near Third, Philadelphia.

## LAP-WELDED WROUGHT IRON TUBES

FOR

TUBULAR BOILERS, FROM 1 1-4 TO 6 INCHES DIAMETER, and

ANY LENGTH, NOT EXCEEDING 17 FEET.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER,

Patentee.

1y25 28 Platt street, New York.

## RAILROAD IRON.

MOUNT SAVAGE IRON WORKS

THIS Company are prepared to execute orders for RAILROAD IRON, of any pattern, and equal in point of quality to any other manufactured.

Address J. M. HOWE,

Dec. 25, 1y\* Pres't. Mt. Savage Iron Works, Maryland.

**RAILROAD IRON.—THE "MONTGOMERY"** Iron Company, Danville, Pa., is prepared to execute orders for the heavy Rail Bars of any pattern now in use, in this country or in Europe, and equal in every respect in point of quality. Apply to MURDOCK, LEAVITT & CO., Agents.

1y48 77 Pine St., New York.

**RAILWAY IRON.—DAVIS, BROOKS & Co.,** No. 68 Broad Street, have now in port on Ship-board, 200 Tons of the best English heavy H Rails, 60 lbs. to the lineal yard, which they offer for sale on favorable terms, also, about 6 to 700 Tons now on the way, to arrive shortly, of the same description of Rail.

Nov. 16, 1846.

46tf

## ENGINEERS and MACHINISTS.

THOMAS PROSSER, 28 Platt St. N. Y. (See Adv.)

J. F. WINSLOW, Albany Iron and Nail Works Troy, N. Y. (See Adv.)

TROY IRON AND NAIL FACTORY, H. Burden, Agent. (See Adv.)

ROGERS, KETCHUM &amp; GROSVENOR, Paterson, N. J. (See Adv.)

S. VAIL, Speedwell Iron Works, near Morristown, N. J. (See Adv.)

NORRIS, BROTHERS, Philadelphia Pa. (See Adv.)

FRENCH &amp; BAIRD, Philadelphia. (See Adv.)

NEWCASTLE MANUFACTURING COMPANY, Newcastle, Del. (See Adv.)

ROSS WINANS, Baltimore, Md.

CYRUS ALGER &amp; Co., South Boston Iron Co.

SETH ADAMS, Engineer, South Boston.

STILLMAN, ALLEN &amp; Co., N. Y.

JAS. P. ALLAIRE, N. Y.

PHOENIX FOUNDRY, N. Y.

ANDREW MENEELY, West Troy.

JOHN F. STARR, Philadelphia, Pa.

MERRICK &amp; TOWNE, do.

HINCKLEY &amp; DRURY, Boston.

C. C. ALGER, Stockbridge Iron Works Stockbridge, Mass.